

SkillsUSA 2015 Contest Projects

Graphic Communications

Click the “Print this Section” button above to automatically print the specifications for this contest. Make sure your printer is turned on before pressing the button.

Overview of Graphic Communications Contest (1 of 3 pages)

Purpose

To assist in preparing along with evaluating each contestant for real world employment, while recognize outstanding students for excellence and professionalism in the field of graphic communications.

Changes

The SkillsUSA - Graphic Communications Contest is constantly evolving to represent the latest technology in the graphics/printing industry. Based off of the suggestions from our technical team, the key element of change for the Graphic Communications Contest in 2015 was the Workflow, from the layout of the equipment on the contest floor, to the contest piece itself. We hear the term Workflow used a lot in production environments, now we are bringing this element into our contest. Workflow of a printed piece is just as important as the Workflow of how the job moves throughout a print shop. In the past each section of the Graphic's contest used a totally different design job. In 2015, the National Graphic Communication contest used a magazine that was incorporated into each section of the contest.

Floor Layout

In 2015, the Graphic Communication Contest sections and equipment was strategically placed to show the Workflow of a job being produced from beginning to end with different types of graphics technology. In our contest floor layout you'll notice that at one end we began with Production Planning. The next section was a combination of what was Electronic Prepress and Preflight. This new section is now called Digital Workflow, which contained the computer stations for recreating a magazine cover and then outputting the saved file to a Digital Proof Press. The next station was Digital Press, followed by Offset Press and then Finishing.

Contest Description

Graphic Communication contestants participate in a seven section contest (listed on next page). A magazine cover is developed / produced through each section of the contest. This workflow from start to finish gives the representation of what it takes to produce a printed piece from the design stages to the final product whether it is output on a Digital Press or an Offset Press with Post-press finishing equipment. Contestants are trained by professionals from the industry on all equipment prior to the contest day. Instructors/advisors are welcome and encouraged to attend during training.

Keep Students Competitive - Complete Contest is Available

The complete Graphic Communications 2015 National Contest is available to use at your State Level Competition. **Contact your SkillsUSA State Director** for the complete contest containing all documents in their original format, as well as the fonts, logos, photos and other images shown on the following pages.

Visit Future Printers of America online for current contest updates, photos from SkillsUSA Nationals and our Industry Support:

Future Printers of America website www.futureprintersofamerica.com
or send an email to info@FPAink.com



Overview of Graphic Communications Contest (2 of 3 pages)

Seven Sections of the Contest - listed in Sequence

TECHNICAL KNOWLEDGE

The contestant completes a general technical knowledge assessment in Graphic Communications.

Contest development provided by Printing Industries of America.

ORAL PROFESSIONAL ASSESSMENT

The contestant participates in an interview exercise using their resume where a team of experts work together interviewing the contestant. The contestant will be able to select from a few different types of graphics/printing positions, that they will interview for and be assessed by the guidelines set in place.

Contest development provided by Printing Industries of America.

PRODUCTION PLANNING

The contestant solves a written production problem relating to paper, ink, hourly rate and other production costs. The results show the cost justification between offset and digital printing.

Contest development provided by Printing Industries of America.

DIGITAL WORKFLOW

The contestant accesses files using Adobe CC on a Macintosh computer donated for use by Ricoh. The contestant follows instructions to match a provided sample of a magazine cover. The contestant will create the insert pages from files provided. The contestant then preflights the job and reviews the overall quality of the file. The assembled magazine file is saved to a storage device and then output on a Xerox Digital Press where the contestant will view a proof of the final product.

Contest development provided by RR Donnelley.

DIGITAL PRESS OPERATIONS

The contestant outputs various jobs on a Ricoh Digital Press including variable data files and a correct version of the magazine cover that was recreated in the Digital Workflow section of the contest.

Contest development provided by Ricoh.

OFFSET PRESS OPERATIONS

The contestant operates a Heidelberg Printmaster 46 press, to print a single color logo onto the preprinted magazine cover. The contestant will be required to setup the feeder and delivery, install a plate, register a single color logo into the correct position to create a final magazine cover on an offset press. In addition to operating the press, the contestant will be provided with preprinted material, which they will examine and identify printing issues (flaws) and take density readings.

Contest development provided by Heidelberg.

FINISHING

The contestant operates a Baum programmable paper cutter, properly trimming down the magazine cover provided that will be preprinted 4 up on a sheet. The contestant will also setup a table top Baumfolder for various folding exercises including folding the magazine cover, followed by a short written test on finishing terms.

Overview of Graphic Communications Contest (3 of 3 pages)

Supporters - listed in alphabetical order

Baumfolder
Future Printers of America
Graphic Arts Education Research Foundation
Heidelberg
National Council For Print Industry Certifications
Print Craft Supply
Printing Industries of America
Quad Graphics
Ricoh
RR Donnelley
Xerox

Equipment Used at 2015 National SkillsUSA

Heidelberg Printmaster QM 46-2
Heidelberg Saphira Pressroom Ink and Chemistry
BaumCut 26.4"
Baum 714XLT Folder
Ricoh Digital Presses
Xerox Digital Press
Portable Spectrodensitometer
Macintosh Computers



Technical Knowledge

Purpose

Technical Knowledge is an online assessment developed using competencies from the Introduction to Graphic Communications accreditation area of PrintED.

Contest development provided by Printing Industries of America.

PrintED/SkillsUSA Skill Connect Assessments competencies and are available in:

Advertising and Design

*** Graphic Communications**

Screen Printing Technology

Digital File Preparation/Digital File Output

Offset Press Operations/Binding and Finishing

The online assessments test technical skills and knowledge through questions enriched with animations, videos, drawings and photographs. Assessments may be used as pre-assessments or post-assessments. Immediate grading and feedback is provided. Students who receive passing scores on these examinations receive student certifications imprinted with the PrintED, GAERF and SkillsUSA logos.

More Information

Websites

GAERF (Graphic Arts Education and Research Foundation).....www.gaerf.org/

PrintED Graphic Communications List of Competencies
.....www.gaerf.org/PrintED/Competencies/IntroductiontoGraphicCommunications.aspx

To purchase PrintED/SkillsUSA Assessments.....www.workforcereadysystem.org



Oral Professional Assessment - Interview & Resume

Purpose

Oral Professional Assessment was developed to replicate the interviewing process. SkillsUSA contestants will answer questions provided by the interviewer (Judge) to the best of their ability.

Interview Process

Prior to Contest Day:

The contestant will submit a resume, which will be given to the judge prior to the contest. The contestant is given a list of positions, a description of a graphics company and questions that may be asked during the interview. The contestant can choose which position within the graphics company they wish to interview.

During the Interview:

After letting the Judge know which position they are applying for, the interview process will begin. The interview is 5-7 minutes long. There may be time at the end of the interview for the contestant to ask questions to the interviewer.

Judging Criteria Includes:

Poise, body language, verbal communications, professionalism of resume, and salesmanship.



Oral Professional Assessment - Directions (1 of 5 pages)

You are applying for one of the following positions (your choice) at Three Lions Graphics near your hometown:

- Assistant bindery operator
- Customer service representative
- Digital press operator
- Graphic designer
- Marketing assistant
- Premedia technician
- Sales representative
- Sheetfed offset press feeder
- Web offset press rolltender

Company Description

Three Lions was founded in the early 1950's, started by Eddie Haskell as a small commercial printing company committed to putting the needs of his customers first and delivering the highest level of quality and service possible.

Haskell kept an eye on the future and invested in emerging technologies and services. Within 15 years, the company was positioned as a driving force in the regional printing industry. Susie Haskell became president in 1985, taking over from her father.

The business grew rapidly during the 1980's and 1990's. Almost three decades later, the Three Lions name is known and respected industry wide for abiding by and maintaining its founding tradition of excellence for the customers whom it serves.

Today, Suzie has taken Three Lions to new heights. Her ability to look beyond industry trends and set new ones has made her one of the most respected leaders in the printing industry. Her commitment to "beyond" cutting edge technology has positioned the company as an innovator in the changing world of digital media.

Today, Three Lions Graphics is a full service facility with capabilities ranging from premedia, printing, binding, mailing, fulfillment, and distribution. It operates 24 hours a day, seven days a week and produces a variety of award-winning printed media—direct mail, manuals, catalogs, magazines, and advertising collateral. The company has the latest in web offset, sheetfed offset, and digital printing technology. In 2012 Three Lions began offering mobile services—developing mobile apps and mobile-enhanced websites for its print customers. It also has a separate division that sells printed products via the Internet, producing with dozens of digital presses. The division boasts that jobs routinely go from on-line submission to its full-color digital presses in eight minutes or less.

Oral Professional Assessment - Directions (2 of 5 pages)

Interview Format/Questions

Your interview will be 5–7 minutes long with the human relations director of Three Lions Graphics. After letting him know which position you are applying for, he will ask you several questions from the following list. There may also be time for you to ask one question about the job or Three Lions, so be prepared with a question.

- How has your education and experience prepared you to work for our company?
- Tell me about your proudest achievement.
- Give me an example of how you were able to effectively resolve a conflict with a fellow student or employee?
- Tell me about a time that you experienced significant disappointment and how you reacted?
- Tell me about a time that you had to get buy in from others to accomplish a goal.
- What is the biggest compliment you have ever received from a teacher or manager?
- Describe how you would handle a situation if you were required to finish multiple tasks by the end of the day, and there was no conceivable way that you could finish them.
- What two positive character traits would your friends use to describe you? Which positive character traits do you still need to develop?
- In what ways would you be an asset to Three Lions Graphics?

Judging

Your interview will be judged in five 20-point categories:

- Poise—self-confident manner and composure during interview
- Body Language—body posture, gestures, facial expressions, and eye contact
- Verbal Communications—Ability to answer interview questions, clearly and concisely
- Professionalism of Resume—effective summary of skills/talents, appropriate organization/format, readability, and grammar/spelling
- Salesmanship—Ability to persuade interviewer of suitability for position

Each category will be scored in the following manner: Excellent = 20 points, Good = 15 points, Fair = 10 points, and Poor = 5 points.

Oral Professional Assessment - Directions (3 of 5 pages)

Position	Description
Assistant Bindery Operator	<ul style="list-style-type: none"> • Set up, adjust and operate a variety of auxiliary binding machines containing several cutting heads, control surfaces or other attachments (i.e. inkjet and mailing devices, case making & decorating equipment, folders, cutters, collators, stitchers, drills, and gluing machines) that can be combined with other equipment and devices to produce a complete bindery and finishing unit that processes printed sheets into final books, catalogs, manuals, directories, magazines or other completed products. • Inspect equipment for safety issues. • May assist with the setup and operation of saddle stitching and/or adhesive binding machines (perfect binders). • Make needed adjustments to coordinate the multiple work stations on a single machine. • Work with team leader and crew on all aspects of production. • Monitor and ensure necessary levels of quality and productivity.
Customer Service Representative	<ul style="list-style-type: none"> • Engage customers to gather job requirements and translate customer requirements into detailed manufacturing/kitting instructions and shipping/postal instructions. Offer suggestions to customers regarding workflow/process improvements to proposed jobs as appropriate. • Ensure information is accounted for and accurate before production begins. Ensure job instructions are entered and verified in the manufacturing system and added to the production schedule. • Communicate with customers during production process to keep them informed of the status of jobs, gather additional information as needed, and coordinate changes to jobs. • Forward/review proofs with customer and obtain approval of materials, such as artwork, color separations, or ink samples. • Coordinate the resolution of customer or manufacturing issues. Communicate with customers regarding the resolution of issues. • Monitor progress of jobs throughout production, confer with manufacturing operations on counts and final runs and ensure the final product meets customer requirements and company standards. • Gather information on work performed to assemble paperwork for billing purposes.
Digital Press Operator	<ul style="list-style-type: none"> • Operate inkjet and electrophotographic digital presses. • Review job instructions to prepare jobs for printing. • Set-up job requirements in digital front end (RIP). • Maintain daily print job production logs and daily delivery manifests. • Setup, program and release jobs from print queue. Adjust image position, perforations and folds on paper. • Monitor quality of job output for correctness and image quality. Ensure color consistency and accuracy according to customer requirements. • Order supplies such as ink, chemical solutions, blankets and rollers, paper, tabs and other items as needed. Maintain inventory levels.

Oral Professional Assessment - Directions (4 of 5 pages)

<p>Graphic Designer</p>	<ul style="list-style-type: none"> • Confer with customers and create designs, concepts, and sample layouts based that reflect excellent layout principles and design concepts and meet customer needs. • Determine size and arrangement of illustrative material and copy, and select style and size of type. • Use page layout, illustration, and image manipulation software to generate images and design files. • Prepare final layouts according to media requirements. • Review final layouts from outside designers and suggest improvements as needed. • Develop graphics and layouts not just for print, but also for mobile-enabled sites, websites, and other digital media. • Communicate instructions to CSR and/or production. • Review digital proofs for content and color. May require approving jobs on press.
<p>Marketing Assistant</p>	<ul style="list-style-type: none"> • Assist the marketing manager with marketing activities. • Assist and coordinate the production of a wide range of marketing communications. • Provide support for marketing events and exhibitions as required. • Assist with the writing and distribution of news releases and social media content. • Keep information on company website and social media sites up-to-date. • Monitor inquiries from website and social media sites and ensure timely and appropriate responses. • Perform research and update the customer and prospect databases.
<p>Premedia Technician</p>	<ul style="list-style-type: none"> • Review electronic files from clients and check them for thoroughness and completeness. • Use page layout software to manipulate the format of the print job to the dimensions of the paper. Account for folds, trims, bleeds and gripper, and add crop marks and color bars as necessary. • Identify missing or problematic components and communicate them to the CSR, customer, and/or production personnel. • Work directly with CSR, customer, and/or production personnel as necessary to work out any problems with the job. Load customer supplied electronic files for output, onto the prepress file server. • Prepare color proofs for customer review. Create manufacturing proofs. • Impose images and operate platemaking equipment (when jobs will be produced on our offset presses). • Perform quality checks on finished plates before releasing to manufacturing.
<p>Sales Representative</p>	<ul style="list-style-type: none"> • Develop a portfolio of customer accounts, selling print and marketing solutions that utilize the wide array of capabilities of Three Lions. • Use expertise in assessing a customer's marketing needs and the specific solutions that our company can provide. • Research and initiate contact with potential new customers. • Service and expand assigned accounts. • Maintain contact and account records. • Follow up on estimates and customer product inquiries. • Communicate job specification requirements accurately and timely to the CSR. • Facilitate and manage customer job approvals.

Oral Professional Assessment - Directions (5 of 5 pages)

Sheetfed Offset Press Feeder	<ul style="list-style-type: none">• Ensure paper, ink, dampening solution, and other raw materials are loaded into press to supply a constant flow of materials while the equipment is running.• Make adjustments to equipment such as feeder mechanism based on the size of the paper.• Deliver equipment components such as plates or spray heads to the equipment for installation.• Recycle old/discarded plates.• Provide basic assistance as needed to makeready the equipment for operation.• Assist with retrieving plates, hanging plates and recycling/storing plates and other tasks associated with makeready of the press.
Web Offset Press Rolltender	<ul style="list-style-type: none">• Load rolls of paper onto automatic splicing unit of web offset press. Inspect rolls of paper for blemishes or tears and cut away damaged area with knife. Roll paper into loading position on automatic splicer, insert shaft of automatic splicer through roll core, secure holding chucks of automatic splicer to shaft ends, and thread paper through press components to prepare press for printing.• Apply adhesive strip to backup roll and insert backup roll onto automatic splicing unit of press to prepare paper for automatic splicing.• Remove roll of leftover paper from press after automatic splicing.• May operate mechanical truck to transport rolls of paper to press area.• Assist with some of the makeready tasks associated with the type of press operated such as hanging plates, examining plates, prepping and installing blankets, adjusting tension, etc.• May clean press and clean and install press components to maintain press in working order.

Oral Professional Assessment - Judges' Score Sheet

2015 SkillsUSA Oral Professional Assessment (total of 100 pts.)

Contestant #	Poise (20)	Body (20)	Verbal (20)	Resume (20)	Sales (20)	Total (100)	Comments
PostSecondary							
501							
502							
503							
504							

Secondary							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
121							
122							

Description of Scoring Categories

Poise	Self-confident manner and composure during interview
Body Language	Body posture, gestures, facial expressions, and eye contact
Verbal Communications	Ability to answer interview questions clearly and concisely
Professionalism of Resume	Effective summary of skills/talents, appropriate organization/format, readability, and grammar/spelling
Salesmanship	Ability to persuade interviewer of suitability for position

Scoring per Category

Excellent	20
Good	15
Fair	10
Poor	5

Production Planning

Purpose

Production Planning was developed to replicate the estimating and billing department(s) of the printing industry. SkillsUSA contestants solve math problems relating to time and materials needed to order materials and complete customers' jobs.

The contestant will solve a written production problem with results for cost justification between offset and digital printing.

Contest development provided by Printing Industries of America.



Production Planning - Test (1 of 5 pages)

SkillsUSA would like to have 18,000 perfect bound books (17,250 printed on an offset press with a common cover sheet and 750 printed on a digital press with variable data on the cover sheet) with a finished size of 8.5" X 11". The book consists of 20 pages printed 2/2 (two colors on both sides) plus the cover printed 4/0 (four colors on one side only). The cover (front and back 4/0) will be trimmed to 11X17.128, providing 1/8" for the spine, which will be scored on the Baum folder.

750 books will have a personalized cover with variable data that will be printed on a digital press. The text weight stock and the cover stock for the 750 books will be printed on the digital press.

17,250 of the books will have a common cover that will be printed on an offset press. The text weight stock and common covers for the 17,250 books will all be printed on the offset press.

Equipment available to you will be as follows:

Heidelberg Anicolor 52 that can print a 14" X 20" sheet 4/0 or 2/2

Ricoh Digital Press that can print a 13" X 19.2" sheet 4/4

Xerox Digital Press that can print a 13" X 19.2" sheet 4/4

Baum-Cut 31.5 Paper Cutter (capable of a 4 sided trim with the sheet size used)

Baumfolder Baum 20 VFM

Rosback 882 PB (Perfect Binder)

Supplies needed for calculations

Paper Stock:

Cover stock: 12" x 18" parent sheet is \$180 per thousand

Text weight stock: 11" x 17" parent sheet is \$52.50 per thousand

The bindery usage will stay the same for all books. Do not account for waste or overages on any of the jobs as the equipment being used produces very little waste during set up and production.

Each answer is worth 3 points with an additional 6 points for showing your work totaling 75 points

Circle the correct answer below out of the multiple choice answers that are closest to your math

Production Planning - Test (2 of 5 pages)

Machine specs and additional pricing needed to calculate the production problem

Heidelberg Anicolor 52 four color perfector 2P2 Specs and Costs:

15,000 impressions (sheets) per hour actual production running speed
14" X 20" sheet size (Two 8.5" X 11" pages per side after trimmed)
Five minute make-ready time (set up time per job using 4 plates 4/0 or 2/2)
\$12.00 per plate
\$240.00 hourly press rate

Ricoh Specs and Costs:

\$0.06 per click
\$0.02 additional charges per click for variable data
\$165.00 computer setup for variable data
Click charges are counted as one per side for the largest sheet size (1 or 4 colors)

Xerox Specs and Costs:

\$0.06 per click
\$0.02 additional charges per click for variable data
\$165.00 computer setup for variable data
Click charges are counted as one per side for the largest sheet size (1 or 4 colors)

Baum-Cut 31.5 Specs and Costs:

800 Sheets of text stock can be cut in one lift
One minute per lift to trim out text weight stock (one cut)
500 Sheets of cover stock can be trimmed in one lift
Two minute per lift to trim out cover stock (two min = four sided trim)
\$90.00 hourly cutter rate

Baumfolder Baum 20 VFM (for scoring the cover only)

9,000 sheets per hour run rate
5 minute make-ready time
\$60 hourly folder/scoring rate

Rosback 882 PB (Perfect Binder)

500 books per hour
15 minute make-ready time
\$120 hourly Perfect Binder rate

Production Planning - Test (3 of 5 pages)

1. How many plates will be needed to run both the text weight pages and cover page on the offset press?

- a. 11 b. 5 c. 44 d. 24 e. 22

2. How much will the plates cost to run the entire offset portion of the job?

- a. 528 b. 288 c. 60 d. 264 e. 132

3. How many sheets will be needed to run cover stock on the **offset press**?

- a. 17,250 b. 18,000 c. 750 d. 18,750 e. 6,500

4. How much will the cover stock cost for the job printed on the **offset press**?

- a. 905 b. 3,240 c. 9,450 d. 32,400 e. 3,105

5. How much will the total hourly run rate, including make-ready time, cost to run the cover stock on the **offset press**?

- a. 200 b. 308 c. 296 d. 276 e. 356

6. How many sheets will be needed to run the text weight stock on the **offset press**?

- a. 97,250 b. 86,250 c. 103,500 d. 43,125 e. 90,000

7. How much will the text weight stock cost for the job printed on the **offset press**?

- a. 4,528.13 b. 5,105.63 c. 4,533.75 d. 4,725 e. 2,264.07

8. How much will the total hourly run rate, including make-ready time, cost to run the text weight stock on the **offset press**?

- a. 1,400 b. 1,425 c. 1,440 d. 1,480 e. 1,500

9. How much will the text weight stock cost for the job printed on the **digital press**?

- a. 208.88 b. 675 c. 196.88 d. 192.40 e. 211.40

Contestant Number _____

Production Planning - Test (4 of 5 pages)

10. How much will the click charges be to print the text weight on the **digital press**?

- a. 225 b. 450 c. 390 d. 165 e. 300

11. How much will the cover weight stock cost for the job printed on the **digital press**?

- a. 1,039.37 b. 139.37 c. 1035 d. 135 e. 232.50

12. How much will the click charges be including all variable data costs to print the covers on the **digital press**?

- a. 210 b. 90 c. 225 d. 255 e. 60

The job will now go to the bindery department where the pages will be cut, scored, collated, and perfect bound creating a book.

The text weight stock will be cut down to 8.5" X 11" from an 11" X 17" sheet.

The cover will be trimmed down to 11" X 17 1/8" sheet from the parent sheet size of 12" X 18".

The covers will then be scored on the folder and then completed on the perfect binder.

The finishing process is the same for both offset and digital work (18,000 perfect bound books).

13. How much time is required to trim the cover stock for both offset and digital combined?

- a. 69 min b. 22.5 min c. 36 min d. 45 min e. 72 min

14. How much will it cost to cut the cover stock for both offset and digital combined?

- a. 216 b. 90 c. 108 d. 216.50 e. 123

15. How much time is required to cut the text weight stock for both offset and digital combined?

- a. 1.88 hours b. 1.98 hours c. 1.99 hours d. 1.78 hours e. 2.08 hours

16. How much will it cost to cut the text weight stock for both offset and digital combined?

- a. 160.02 b. 179.10 c. 178.20 d. 187.20 e. 168.75

17. How long will it take to score the cover stock including make-ready time for both offset and digital combined?

- a. 2 hours b. 2.08 hours c. 3.08 hours d. 3 hours e. 1.08 hours

18. How much will it cost to score the cover stock including make-ready time for both offset and digital combined?

- a. 250 b. 125 c. 184.80 d. 180 e. 64.80

Production Planning - Test (5 of 5 pages)

19. How long will it take to perfect bind the books including make-ready time for both offset and digital combined?

- a. 34.5 hours b. 34.75 hours c. 1.75 hours d. 36.25 hours e. 36 hours

20. How much will it cost to perfect bind the books including make-ready time for both offset and digital combined?

- a. 4,350 b. 210 c. 4,320 d. 4140 e. 4170

21. How much is the total cost to produce the entire job (18,000 books)?

- a. 15375.75 b. 15,059.75 c. 15,455.75 d. 15,320.75 e. 15,575.55

22. The total cost to produce the 17,250 books printed on the **offset press** is \$14,250.89. How much will this process cost per book?

- a. 1.21 b. 1.61 c. 0.79 d. 1.42 e. 0.83

23. The total cost to produce the 750 digitally produced books with variable data is \$1,204.86. How much will this process cost per book?

- a. 0.79 b. 0.83 c. 0.79 d. 1.61 e. 1.21

24. **BONUS POINTS FOR SHOWING YOUR WORK IS WORTH 6 POINTS**



Total _____ Contestant Number _____

Production Planning - Test Answer Key (1 of 3 pages)

Contestant Number _____

1. How many plates will be needed to run both the text weight pages and cover page on the offset press?

- d. 24 a. 11 b. 5 c. 44 d. 24 e. 22

2. How much will the plates cost to run the entire offset portion of the job?

- b. 288 a. 528 b. 288 c. 60 d. 264 e. 132

3. How many sheets will be needed to run cover stock on the **offset press**?

- a. 17,250 a. 17,250 b. 18,000 c. 750 d. 18,750 e. 6,500

4. How much will the cover stock cost for the job printed on the **offset press**?

- e. 3,105 a. 905 b. 3,240 c. 9,450 d. 32,400 e. 3,105

5. How much will the total hourly run rate, including make-ready time, cost to run the cover stock on the **offset press**?

- c. 296 a. 200 b. 308 c. 296 d. 276 e. 356

6. How many sheets will be needed to run the text weight stock on the **offset press**?

- b. 86,250 a. 97,250 b. 86,250 c. 103,500 d. 43,125 e. 90,000

7. How much will the text weight stock cost for the job printed on the **offset press**?

- a. 4,528.13 a. 4,528.13 b. 5,105.63 c. 4,533.75 d. 4,725 e. 2,264.07

8. How much will the total hourly run rate, including make-ready time, cost to run the text weight stock on the **offset press**?

- d. 1,480 a. 1,400 b. 1,425 c. 1,440 d. 1,480 e. 1,500

9. How much will the text weight stock cost for the job printed on the **digital press**?

- c. 196.88 a. 208.88 b. 675 c. 196.88 d. 192.40 e. 211.40

10. How much will the click charges be to print the text weight on the **digital press**?

- b. 450 a. 225 b. 450 c. 390 d. 165 e. 300

Production Planning - Test Answer Key (2 of 3 pages)

11. How much will the cover weight stock cost for the job printed on the **digital press**?

- d. 135** a. 1,039.37 b. 139.37 c. 1035 d. 135 e. 232.50

12. How much will the click charges be including all variable data costs to print the covers on the **digital press**?

- c. 225** a. 210 b. 90 c. 225 d. 255 e. 60

The job will now go to the bindery department where the pages will be cut, scored, collated, and perfect bound creating a book.

The text weight stock will be cut down to 8.5" X 11" from an 11" X 17" sheet.

The cover will be trimmed down to 11" X 17 1/8" sheet from the parent sheet size of 12" X 18".

The covers will then be scored on the folder and then completed on the perfect binder.

The finishing process is the same for both offset and digital work (18,000 perfect bound books).

13. How much time is required to trim the cover stock for both offset and digital combined?

- e. 72 min** a. 69 min b. 22.5 min c. 36 min d. 45 min e. 72 min

14. How much will it cost to cut the cover stock for both offset and digital combined?

- c. 108** a. 216 b. 90 c. 108 d. 216.50 e. 123

15. How much time is required to cut the text weight stock for both offset and digital combined?

- a. 1.88 hours** a. 1.88 hours b. 1.98 hours c. 1.99 hours d. 1.78 hours e. 2.08 hours

16. How much will it cost to cut the text weight stock for both offset and digital combined?

- e. 168.75** a. 160.02 b. 179.10 c. 178.20 d. 187.20 e. 168.75

17. How long will it take to score the cover stock including make-ready time for both offset and digital combined?

- b. 2.08 hours** a. 2 hours b. 2.08 hours c. 3.08 hours d. 3 hours e. 1.08 hours

18. How much will it cost to score the cover stock including make-ready time for both offset and digital combined?

- b. 125** a. 250 b. 125 c. 184.80 d. 180 e. 64.80

19. How long will it take to perfect bind the books including make-ready time for both offset and digital combined?

- d. 36.25 hours** a. 34.5 hours b. 34.75 hours c. 1.75 hours d. 36.25 hours e. 36 hours

Production Planning - Test Answer Key (3 of 3 pages)

20. How much will it cost to perfect bind the books including make-ready time for both offset and digital combined?

- a. 4,350 a. 4,350 b. 210 c. 4,320 d. 4140 e. 4170

21. How much is the total cost to produce the entire job (18,000 books)?

- c. 15,455.75 a. 15375.75 b. 15,059.75 c. 15,455.75 d. 15,320.75 e. 15,575.55

22. The total cost to produce the 17,250 books printed on the **offset press** is \$14,250.89. How much will this process cost per book?

- e. 0.83 a. 1.21 b. 1.61 c. 0.79 d. 1.42 e. 0.83

23. The total cost to produce the 750 digitally produced books with variable data is \$1,204.86. How much will this process cost per book?

- d. 1.61 a. 0.79 b. 0.83 c. 0.79 d. 1.61 e. 1.21

24. BONUS POINTS FOR SHOWING YOUR WORK IS WORTH 6 POINTS

Total _____ Contestant Number _____

Digital Workflow

Purpose

Digital Workflow was developed to replicate employment within the prepress department of a printing company. SkillsUSA contestants are instructed to duplicate a customer's layout(s). Software used is Adobe cc. All Images for the layout(s) are provided in a folder.

The contestant then preflights the job and reviews the overall quality of the file. The completed file is saved to a storage device and then output on a Xerox Digital Press where the contestant will view a proof of the final product.

Contest development provided by RR Donnelley.



Digital Workflow - Directions for Contestant (1 of 4 pages)

Follow these basic steps and sample layouts to create the cover and page files for this project.

- Covers and pages will print in 4-color process. Covers will bleed .125 all four sides.
- If you are not clear about one of the steps, just do your best to make it look like the sample.
- Remember to save often.

You may write on this sheet, but do not remove from testing area.

Body Pages Instructions:

- ☐ 1. Create a new four page InDesign document, 8.5" wide and 11" tall.
- ☐ 2. Click on Facing Pages.
- ☐ 3. Set the margins to .5"
- ☐ 4. Save document as "*Contestant-number*"_Body.
- ☐ 5. Center each of the four pages of 1 GC_Entire Contest Overview 2014.pdf into the four pages of the InDesign document in order.
- ☐ 6. Create a PDF/X-1a:2001 PDF with .125" bleed, crop and bleed marks with a .125" offset.

Cover set-up instructions:

- ☐ 1. Launch InDesign. Create a new single page document, 17" wide by 11" tall. Do not check facing pages. Make 2 columns, with a ½" gutter. Set margins at ¼" all around. Project is an 8 ½" x 11" trim, saddle wire bind. Cover size is 2 x trim (no spine). You will be building the front and back covers on this 17" width. Front cover occupying 8 ½" x 11" of it and the back cover the other 8 ½" x 11" of the document. A guide line at 8.5" will help you separate the front cover from the back cover. Reminder, you will have outside front and back covers to create, as well as inside front and back covers.
- ☐ 2. Save document as, "*Contestant-number*"_CVR.
- ☐ 3. Create Process color: 65C 25M 0Y 0K; named Background Blue.

Outside Front Cover Instructions:

- ☐ 1. Create full page box and fill with Background Blue color. Set bleed accordingly.
- ☐ 2. Place "**SkillsUSA 50 slogan 1c.eps**" at 155%. Position 1/2" from top and 1/2" from front. Create drop shadow in screen mode, 35% opacity, distance .1375, 135 angle, X and Y offsets .0972 and size .0694

Digital Workflow - Directions for Contestant (2 of 4 pages)

- ☐ 3. Create box at 3 ¾" x 1 ¼". Import image "**Graphic_Communication.jpg**" into it at 45%. Position image in box per sample layout. Angle box and image at 45 degrees. Position ¼" from top and spine/back. Create drop shadow with multiply blend and 35% opacity. 90 degree angle and .125 Y offset. Option size 1/16", object knocks out.
- ☐ 4. Place image "**The_Winners_Are.jpg**" at 60% in a 8" x 4" box. Position box 3 3/8" from top and centered side to side. Create directional feathered edges at 3/8" all around. No other effects.
- ☐ 5. Create text box 7 5/8" from top and ¼" from spine and import text document "**FC_Text**" into it. Or type set it yourself using the sample layout for guidance. Set header type at 30pt Gills Sans Ultra Bold. The main text at 18pt Minion Pro. And the "Thanks" at 18pt Noteworthy. 7/16" space between the header type and main type. Note, there are 3 errors in the imported text to be found and corrected.
- ☐ 6. Place "**mule.psd**" image at 30%, ¼" from bottom and 3/8" from front.
- ☐ 7. Set text wrap on mule image and format text to match sample layout.

Outside Back Cover Instructions:

- ☐ 1. Create 2" Blue bar at top of page. Use same blue as the front cover background. Set bleed accordingly.
- ☐ 2. Set type per sample layout starting at 3/8" from top and ½" from edge. "Thanks" is 36pt Noteworthy. All other type is 30pt Minion Pro. Once all logos are placed, format text to match sample copy.
- ☐ 3. Place **center column** logos with first logo centered on page and starting ¼" from blue bar. All logos thereafter are to be placed a ½" apart and centered one under the other. Logo names in the order they fall and percentage to place them is:
 - 1) **HD_4C_M.EPS** -75%
 - 2) **rrdonnelleylogo_wht.jpg** – 30%
 - 3) **NCPIC Logo (color no background)(2).eps**- 100%
 - 4) **GAERF-4c.tif** – 60%
 - 5) **photo3700_orig.tif** – 60%
 - 6) **Ferris_Box_Flame_Stacked_Wordmark_2012.eps** – 25%
 - 7) **William D Ford Logo 2014 Vector pms129.psd** – 25%
 - 8) **quadlogo_medium.tif** – 100%.

Digital Workflow - Directions for Contestant (3 of 4 pages)

- ☐ 5. Left side column logo placement starts with top logo, **ISD917-CTE Logo.tif** – 60%, positioned 1 5/8” from top and 3/8” from left edge. The ensuing logos are then placed evenly spaced with the bottom logo ending at ¼” from bottom. Logos are to be centered with one another top to bottom. The equal spacing doesn’t need to be perfect, eyeballing will do. Logo names in the order (top to bottom) they fall and percentage to place them is:
 - 1) **ISD917-CTE Logo.tif** – 60%
 - 2) **Baum logo small.tif** – 100%
 - 3) **PC_Logo.jpg** – 50%
 - 4) **PrIndAm_Mktg_Logo_HiRes.jpg** – 50%.
- ☐ 6. Right side column logo placement starts with first logo, **Saline_hornet_vector.eps** – 50%, positioned from wing tips 5/8” from top and 1/4” from spine. The ensuing logos are then placed evenly spaced with the bottom logo ending at ¼” from bottom. Logos are to be centered with one another top to bottom. Except the Pittsburgh logo, it will be ¼” from spine. The equal spacing doesn’t need to be perfect, eyeballing will do. Logo names in the order they fall (top to bottom) and percentage to place them is:
 - 1) **Saline_hornet_vector.eps** – 50%
 - 2) **fpalogoByrd 6_14-lg.png** – 40%
 - 3) **xer_3ln_r_cmyk.eps** – 55%
 - 4) **PSU_GIT Dept Block-01.jpg** – 50%
 - 5) **Pkr Color HvyE 185 u[Converted].eps** – 100%.

Inside Front Cover Instructions:

- ☐ 1. Add second page.
- ☐ 2. Create 2” Background blue bar across top of page. To be extended across inside back cover as well. Adjust for bleed accordingly.
- ☐ 3. Place Skills logo, **“SkillsUSA 50 slogan 1c.eps”**, at 95%, ¼” from top and front edge.
- ☐ 4. Create an 8 ½” x 4” picture box abutting the blue bar and import the **“Gangs_all_Here.jpg”** image into it at 52%. Position per provided copy. Adjust for bleed accordingly.
- ☐ 5. The bottom four images are in a 4 ¼” x 2 ½” picture box abutting each other and are placed as such:
 - 1) Top row, left to right: **Baum_Kids_Fold.jpg** at 35% and **MacHelp.jpg** at 35%.
 - 2) Bottom row, left to right: **FlatCut.jpg** at 30% and **Questions.jpg** at 35%.Position per copy. Adjust for bleed accordingly.
- ☐ 6. Place a 4 pt white divider bar between all picture boxes as seen in copy.

Digital Workflow - Directions for Contestant (4 of 4 pages)

Inside Back Cover Instructions:

- ☐ 1. If you didn't extend blue bar from inside front cover across the inside back cover, do so now. Or create a 2" Background blue bar across top of cover.
- ☐ 2. Place Skills logo, "**SkillsUSA 50 slogan 1c.eps**", at 95%, ¼" from top and back edge.
- ☐ 3. Set type per copy, using 24 pt Minion Pro for the main text and 30 pt Noteworthy for the "Thanks". Start type 3/8" from gutter and top.
- ☐ 4. Create six picture boxes at size 4 ¼" x 3". Place them two across and three down, abutting the blue bar and each other.
- ☐ 5. In the picture boxes, import images as noted.
 - 1) Top row left to right: **HeidelbergCrew** at 30% and **DonnelleyCrew** at 70%.
 - 2) Center row left to right: **The_Interview** at 30% and **Folder_Instructions** at 45%.
 - 3) Bottom row left to right: **Ricoh** at 30% and **Xerox** at 50%.Position per copy. Adjust for bleed accordingly.
- ☐ 6. Place a 4 pt white divider bar between all picture boxes as seen in copy.

Once complete, Preflight files for printability. Check that all images are CMYK or grayscale, bleeds are sufficient and spot colors are printing CMYK.

Create a PDF/X-1a:2000 PDF, with bleeds, of both inside and outside covers.

Clean up swatches and Package your documents and arts/images to a folder named with your competition number. Include the PDFs in this package.

Graphic Communications - SkillsUSA Nationals 2015

Digital Workflow - Final Design Sample

Actual size of layout is 11x17 with a single fold

Thanks to our Sponsors for supporting the future of our Industry....

Graphic Communications

50 SkillsUSA Champions@Work

Kansas City's last hurrah...

After a highly successful 21-year run, the 50th SkillsUSA Championship is the last to be held in Kansas City. During its time in Kansas City, they have almost doubled the number of competitions and the number of competitors taking part, simply outgrowing any venue Kansas City has to offer. A huge 'Thanks' goes to Kansas City for making the SkillsUSA Championships welcome in your city. So it's off to Louisville for next year's competitions....

Cover - Outside (Back / Front)

50 SkillsUSA Champions@Work

A special thanks to the volunteers, whose time and expertise make it all happen....

50 SkillsUSA Champions@Work

Cover - Inside

Graphic Communications - SkillsUSA National 2014

Technical Committee
 Co-chair: Mike Sorenson (PH)
 Ed Ball, Milwaukee, Carlin Inc. (PH)
 Dave Burdick, University of Central Missouri (PH)
 Jim Brundage, Brundage Corp. (PH)
 Elmer Cassidy, Graphic Arts Education and Research Foundation (PH)
 Paul Cavanaugh, Heidelberg USA Inc. (GA)
 Paul Foster, Printing and Graphics Association of Mid-America (PH)
 Steve Hall, Boothe-Hall USA Inc. (GA)
 Thomas Haggins, Boothe-Hall USA Inc. (GA)
 Alan Haggins, Boothe-Hall USA Inc. (GA)
 Anne O'Garra, QualGraphics (PH)
 James O'Garra, QualGraphics (PH)
 Mark Palmer, Brundage Corp. (PH)
 Ed Roney, Heidelberg USA Inc. (GA)
 Rebecca Robinson, RR Donnelley (PH)
 Brian Rutherford, Printing Industries of Philadelphia-ACC (PH)
 Timothy Suggs, Heidelberg USA Inc. (GA)
 Don Wladar, RR Donnelley (PH)
 Barry Wilson, University of Central Missouri (PH)
 Jim Wladar, Printing Industries of America Inc. (PH)

National Education Team
 Chair: Shirley Byrns, Wilson D. Ford Career/Technical Center (PH)
 Craig Kopp, Austin High School (PH)
 Karina Walker, Dallas County Area Learning Center (PH)
 Adam Rodriguez, J & W Whitaker, Conover (PH)

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 QualGraphics
 Ricoh
 RR Donnelley
 Xerox

Graphic Communications - SkillsUSA National 2014

Overview of Graphic Communications Contest

Purpose
 The SkillsUSA - Graphic Communications Contest is currently evolving to represent the latest technology in the graphic printing industry. Competitors are asked to professionalize their industry and all equipment prior to the contest. By interacting with the judges and the industry, all equipment prior to the contest is to be professionalized. The contest is to be held during the week of the contest. The contest is to be held during the week of the contest.

DIGITAL PRINTING - The contestant creates a PDF file to be the final using CorelDraw. The contestant creates an electronic job ticket and their price and submits the digital job ticket using the PDF file.

DIGITAL WORKFLOW (PRINTING) - The contestant creates a file using Adobe Photoshop and then prints the file using a Heidelberg Speedmaster 46-2. The contestant creates a file using Adobe Photoshop and then prints the file using a Heidelberg Speedmaster 46-2. The contestant creates a file using Adobe Photoshop and then prints the file using a Heidelberg Speedmaster 46-2.

ELECTRONIC PREPRESS (PAGE LAYOUT) - The contestant duplicates a customer's layout and then prints the layout using a Heidelberg Speedmaster 46-2. The contestant duplicates a customer's layout and then prints the layout using a Heidelberg Speedmaster 46-2. The contestant duplicates a customer's layout and then prints the layout using a Heidelberg Speedmaster 46-2.

FINISHING - The contestant operates a BINDER/PROOFER. The contestant operates a BINDER/PROOFER. The contestant operates a BINDER/PROOFER. The contestant operates a BINDER/PROOFER. The contestant operates a BINDER/PROOFER.

OFFSET PRESS OPERATIONS - Using a Heidelberg Speedmaster 46-2 the contestant uses all the tools and equipment to create a Heidelberg Speedmaster 46-2. The contestant uses all the tools and equipment to create a Heidelberg Speedmaster 46-2. The contestant uses all the tools and equipment to create a Heidelberg Speedmaster 46-2.

ORAL PROFESSIONAL ASSESSMENT - The contestant participates in an interview session.

PRODUCTION PLANNING - The contestant solves production estimating problems. The contestant solves production estimating problems. The contestant solves production estimating problems. The contestant solves production estimating problems. The contestant solves production estimating problems.

TECHNICAL KNOWLEDGE - The contestant completes a general technical knowledge assessment. The contestant completes a general technical knowledge assessment. The contestant completes a general technical knowledge assessment. The contestant completes a general technical knowledge assessment. The contestant completes a general technical knowledge assessment.

Keep Students Competitive
 Help Students become better workers for current contest updates. Please contact: SkillsUSA
 Nationals and our Industry Support
 Please contact: SkillsUSA
 or send an email to: info@skillsusa.com

Graphic Communications - SkillsUSA National 2014

Judges and Technical Support
 Steve Hall, Boothe-Hall
 Ed Ball, Milwaukee, Carlin Inc.
 Dave Burdick, University of Central Missouri
 Jim Brundage, Brundage Corp.
 Elmer Cassidy, Graphic Arts Education and Research Foundation
 Paul Cavanaugh, Heidelberg USA Inc.
 Paul Foster, Printing and Graphics Association of Mid-America
 Steve Hall, Boothe-Hall USA Inc.
 Thomas Haggins, Boothe-Hall USA Inc.
 Alan Haggins, Boothe-Hall USA Inc.
 Anne O'Garra, QualGraphics
 James O'Garra, QualGraphics
 Mark Palmer, Brundage Corp.
 Ed Roney, Heidelberg USA Inc.
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 Timothy Suggs, Heidelberg USA Inc.
 Don Wladar, RR Donnelley
 Barry Wilson, University of Central Missouri
 Jim Wladar, Printing Industries of America Inc.

WHAT WILL BE YOUR PRIZE?

APPLE MacBook Pro
APPLE iPad Mini
APPLE Watch

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Bronze / THIRD PLACE MEDALIST FOR SECONDARY AND POST-SECONDARY
APPLE WATCH

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 Ricoh
 RR Donnelley
 Xerox

Inside Pages

Inside Pages

Digital Workflow - Judges' Score Sheet (1 of 2 pages)

Contestant Number _____

SKILLSUSA 2015 DIGITAL WORKFLOW

Content Creation _____ (184 points possible)

Document Setup **missed**

- Trim size correct (4 pts) _____
- Document bleed set correctly (4 pts) _____
- Cover page orientation/layout (4 pts) _____
- Cover file named per instructions (4 pts) _____
- Body pages positioned per instructions (4 pts) _____
- Background Blue setup correctly (4 pts) _____
- FC blue panel, back cover blue bar setup correctly (4 pts) _____
- IFC/IBC blue bar setup correctly (4 pts) _____
- Interior: Page size and margins (4 pts) _____

Typesetting **missed**

- FC_Text imported/typeset (6 pts) _____
- FC main header in 30 pt Gill Sans Ultra Bold, 100K (4 pts) _____
- FC "Thanks" in 18 pt Noteworthy (4 pts) _____
- Text wrap around FC "mule.psd" (4 pts) _____
- BC typeset in 30 pt Minion Pro (6 pts) _____
- BC "Thanks" in 36 pt Noteworthy (4 pts) _____
- IBC typeset in 24 pt Minion Pro, placement correct (6 pts) _____
- No type overflows (2 pts) _____
- FC typos corrected (4 pts) _____

Layout/placement **missed**

- OFC: SkillsUSA 50 placed (5 pts) _____
- OFC: SkillsUSA 50 drop shadow (5 pts) _____
- OFC: Graphic Communications box placed correctly (4 pts) _____
- OFC: Graphic Communications drop shadow (5 pts) _____
- OFC: The Winners Are placed – note layering w/ gray box (3 pts) _____
- OFC: The Winners Are feathering (5 pts) _____
- OBC: Left column logos placed and scaled correctly (12 pts) _____
- OBC: 917 logo silhouetted (5 pts) _____
- OBC: Center column logos placed and scaled correctly (12 pts) _____
- Interior: Page placement (5 pts) _____

Layout/placement (continued) **missed**

- OBC: Right column logos placed and scaled correctly (12 pts) _____
- IFC: SkillsUSA 50 logo placed (5 pts) _____
- IFC: Group photo placed (5 pts) _____
- IFC: Four bottom photos placed (5 pts) _____
- IFC: White divider rules placed (5 pts) _____
- IBC: SkillsUSA 50 placed (5 pts) _____
- IBC: Six images at bottom place (5 pts) _____
- IBC: White divider rules placed (5 pts) _____

Deliver to Print and Print _____ (116 points possible)

Document Packaging **missed**

- Saved to correct location/file name (5 pts) _____
- All necessary files included (5 pts) _____
- Directory structure well organized (4 pts) _____
- PDF/X-1a:2000 file conformance (4 pts) _____
- Preflight info included with files (4 pts) _____

Document Structure and Geometry **missed**

- Correct bleed allowance in doc (5 pts) _____
- Bleed elements extended to bleed (5 pts) _____
- Appropriate marks outside page (5 pts) _____
- Trim marks accurate for size (2 pts) _____
- Spreads butt without gaps/overlap (5 pts) _____

Colors **missed**

- Colors in palette correct builds (8 pts) _____
- All elements in CMYK colors (10 pts) _____
- Overprints/knockouts appropriate (5 pts) _____

Images **missed**

- Low res images detected/fixed (4 pts) _____
- Image color spaces correct (4 pts) _____
- Drop shadows reproduce well (8 pts) _____
- No problems from layering or transparencies (8 pts) _____

Fonts **missed**

- All fonts embedded (4 pts) _____
- Fonts NOT subsetted (1 pts) _____

Digital Output

- Proper output and fold (20 pts) _____

Total Points Possible: 300

Less points missed _____

Final Score _____

Digital Workflow - Judges' Score Sheet (2 of 2 pages)

Contestant Number _____

JUDGES COMMENTS (OPTIONAL)

OVERALL APPEARANCE _____

EXECUTION _____

METHODOLOGY AND ORGANIZATION _____

Digital Press - Equipment: Ricoh Pro C5110S

Purpose

Digital Press Operations is designed to replicate employment within a corporate Centralized Reproduction department or a traditional commercial printer that uses digital printing technologies as part of their offerings.

SkillsUSA contestants retrieve PDF files from a folder on a Macintosh computer. Paper stock is pre-loaded in the printer and the Paper Catalog is already set up. Job ticketing instructions are provided in this guide. SkillsUSA contestants import the files into the Fiery using Command Workstation. Once the files are imported, the contestants create an electronic job ticket and correctly print and finish the file using the digital press.

Digital jobs include variable data files and a correct version of the magazine cover that was recreated in the Digital Workflow section of the contest.

Contest development provided by Ricoh.



Digital Press - Objective

Objective:

Correctly import, job ticket and print three digital files.

The contestant will be given three (3) opportunities to correctly print three (3) jobs. This gives the contestant an opportunity to print a job that might not print correctly, make any necessary changes and reprint the job correctly. If more than three attempts are required to print the job correctly, the contestant will lose 1 point for every additional attempt. A maximum of five (5) attempts will be allowed for the competition.

All jobs will need to be submitted to the judge. Contestants will write their contestant number on the front of each job.

The contestant will have 50 minutes to produce the three jobs and answer the questions at the end of the assessment. No additional points are given for finishing early.

Digital Press - Job Descriptions (1 of 2 pages)

Job 1—Rock, Paper, Scissors

Job Description: This job is an 8 ½ x 11 book that requires duplex printing with a dual staple at the top of the book. Print landscape and staple on the long edge.

ROCK PAPER SCISSORS



A GUIDE TO SUBSTRATES/PAPER

RICOH
imagine. change.

Job 2—A Brief History of Print

Job Description: This job consists of 4 8 ½ x 11 pages. The pages need to be imposed as a newsletter and printed on 11 x 17 paper.

A Brief History of PRINT

RICOH
imagine. change.



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Learning
Institute
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Graphic Communications – SkillsUSA National Conference 2015

Job 3—Variable Data Postcards

Job Description: This job consists of postcards that were created in Fusion Pro and contain variable data. This job needs to be imposed multi-up so that it can be cut and ready for mailing.



Digital Press - Directions (1 of 4 pages)

Job 1 Procedures:

Objective: Create a duplex (two-sided) book using the paper catalog for paper select. The job should be finished in-line with two staples on the top (long) edge.

Jobs are located in the folder on the computer thumbdrive called **2015 SkillsUSA Competition Files**.

Import the **01-RockPaperScissors.pdf** file into the Fiery HELD queue either by **dragging and dropping** or using the Fiery's **File>Import Job** steps covered in the training.

Once the job appears in the Held queue, right-click on the job and select **Properties**.

Once the Job Properties window opens you will need to program the job for printing as follows:

- **Paper/Media:** Hammermill 24# Color Copy 8.5 x 11
- **Copies:** 2 sets
- **Layout:** Duplex Open to Top
- **Finishing:** Staple 2 at Top

Review your job and submit it for printing.

You should see your job in green in the Processing Pane just above the Queue pane. Once the job is finished processing you should see your job printing in green in the Printing Pane. The blue light on the Pro C5110S will turn on while your job is printing.

Retrieve your final output. Write your name(s) on the top of one copy of the output. Keep the other sets as sample jobs. Turn in the job with your Contestant Number on it along with Jobs 2 and 3 and your score sheet.

Digital Press - Directions (2 of 4 pages)

Job 2 Procedures:

Objective: Create a four page imposed document using the Fiery print driver and print on 11 x 17 gloss paper.

Import the **02_A Brief History of Print.pdf** file into the **HELD** queue.

Right-click on the job and select **Properties**. Once the Job Properties window opens you will need to program the job for printing as follows:

- **Paper/Media:** Hammermill 24# Color Copy 11 x 17
- **Copies:** 2 sets
- **Layout:** Booklet
- Scroll down to the Cover section of the dialog box. Click on the down arrow for Content input. Select **Front & Back Separately**. For Front Cover select **Print on both sides**. For Back Cover select **Print on both sides**.

Review your job and submit it for printing.

You should see your job in green in the Processing Pane just above the Queue pane. Once the job is finished processing you should see your job printing in green in the Printing Pane. The blue light on the Pro C5110S will turn on while your job is printing.

Retrieve your final output. Write your Contestant Number on the top of one copy of the output. Keep the other sets as sample jobs. Turn in the job with your Contestant Number on it along with Jobs1 and 3 and your score sheet.

Digital Press - Directions (3 of 4 pages)

Job 3 Procedures:

Objective: Create a variable data postcard job that is imposed and ready for cutting and mailing.

Import the **03_JensenBank VDP.pdf** file into the **HELD** queue.

Right-click on the job and select **Impose**. If you get a window asking if you want to use the Demo Mode, select Yes. Once the Impose window opens you will need to program the job for printing as follows:

- Gangup
- Cut and Stack
- **Sheet:** 11 x 17 (You will select Edit... and next to **Media**, select Choose from Paper Library. You can then select Tray 2 with the 11 x 17 paper).
- **Duplex:** Open to Left
- Layout Orientation: Landscape
- Row & Column: 2 x 2
- **Scaling:** Scale to Fit
- **Marks:** Define . . . and put a check mark in the box next to Print trim marks
- Close Impose
- Save the Job Name with your Contestant Number (Example: 1234.dbp)
- Print your job

You should see your job in green in the Processing Pane just above the Queue pane. Once the job is finished processing you should see your job printing in green in the Printing Pane. The blue light on the Pro C5110S will turn on while your job is printing.

Digital Press - Directions (4 of 4 pages)

Retrieve your final output. Write your Contestant Number on the top of the first page of the output. Keep the other pages as sample jobs. Turn in the job with your Contestant Number on it along with Jobs1 and 2 and your score sheet.

Digital Press - Questions (1 of 3 pages)

Answer the following questions

Scenario

You are working for Midwest Graphics and Digital Print. Midwest is trying to become more digitally oriented but has still opts for traditional offset for some jobs. Midwest's owner came to you to determine if they should attempt to produce a recurring mail piece digitally on the new Ricoh device. The owner gave you input data about costs, machine capabilities, outside vendors [mail houses] etc. Your task is to analyze the situation and data and recommend a course of action regarding the best way to produce the job. The job specifications are:

- 16,000 finished post cards. 4 different versions [4000 each version]
- Finished size is 4.25"x5.5" No Bleed, 4 color over 1 color [you can yield 4 cards from 1 8.5x11 sheet] The stock is 80lb coated cover
- Each card gets a unique name imprinted [addressee]
- Cards must be sorted by zip code before delivery to post office.

Offset Costs:

- \$250 BHR to print multiple up on a 40" sheet [no mailing list names imprinted]; Estimate time to complete is 2 hours
- \$50 to cut cards for mailing house
- \$20 cost to deliver cards to mail house
- \$150 cost for mail house to imprint and sort 16,000 names
- \$20 cost to deliver to post office
- Time to produce job – 5 working days

Digital Press - Questions (2 of 3 pages)

Digital Costs

- \$370 to produce the job on the Ricoh device [4 up on 8.5"x11" on card stock, with names imprinted
- \$35 to cut cards to size and break out into correct zip codes
- \$20 to deliver to post office
- Time to produce job – 4 working days

Questions

1. What is the total cost to produce the job on offset?

2. What is the total cost to produce the job on the Ricoh equipment?

Digital Press - Questions (3 of 3 pages)

Digital and Offset Compare/Contrast

1. List two technical differences between digital and offset printing.

2. List two technical similarities between digital and offset printing.

Digital and Offset Applications

1. List two applications (types of jobs) where digital is typically more efficient than offset.

2. List two Fiery capabilities / features that automate workflows.

Digital Press - Judges' Score Sheet

Contestant Number

Task (Points Value)	Points Earned
Printing Job 1 2-Sided Printing 8 ½ x 11 Gloss Paper Stock Dual Stitching—2 at left 4 copies of the job (30points)	
Printing Job 2 Using Booklet function in Fiery 11 x 17 correctly impose and document print 4 copies of the job (30 points)	
Print Job 3 Using the Impose function in the Fiery, correctly impose the postcards so they are properly laid out front to back. Print trim marks 1 set of all postcards (40 points)	
Final Questions Scenario (20 points) Question 2 (20 points) Question 3 (20 points)	
Total Possible Points (160 points)	

Offset Press - Equipment: Heidelberg Printmaster QM 46-2

Purpose

Offset Press replicates employment within the press department of a printing company.

Operate Offset Press - Single Color Run:

SkillsUSA contestants are responsible to operate a Heidelberg Printmaster 46 press, to print a single color logo onto the preprinted job. The contestant will be required to setup the feeder and delivery, install a plate, register a single color logo into the correct position to create a job on an offset press.

Written / Printing Issues Identification:

In addition to operating the press, the contestant will be provided with preprinted material, which they will examine and identify printing issues (flaws) and take density readings.

Contest development provided by Heidelberg.



Offset Press - Objective and Directions

Objective:

Complete offset press operations by imprinting a single color logo on a pre-printed 4 color sheet

Competitors will be given one plate to complete the final imprint color on a four color job. The plate will need to be mounted on the press. The feeder and delivery will need to be set up to feed and deliver 11" x 17" 80 lb. text. The image will need to be printed and registered to the preprinted sheet.

The competitor will be given one stack of preprinted paper for the job. The job will need to be set up using the least amount of sheets as possible. Only 75 quality sheets will be accepted for judging the completed job. Every 3 sheets equal 1 point for a maximum total of 25 points.

All sheets are to be submitted to the judge (Good, Bad, and unprinted sheets). Include competitor number with each job. **The completed job is to be left in the delivery of the machine.**

Plate will need to be ejected from the machine. Once this is completed the blanket will need to be cleaned along with making sure the area is clean.

The competitor will be judged on press make-ready, set up of feeder and delivery, registration to the preprinted sheet, quality of printed sheets, knowledge of the printing process, and clean-up of work area. Student will also be judged on knowledge of print issues from preprinted samples showing flaws.

55 total minutes are given to complete this project 27 minutes on press. No additional points are given for finishing early.

For the safety of the operator and the machine, asking a judge where an adjustment knob is on the machine is allowed. The judge cannot make any adjustments for the competitor without penalty.

Safety first, the judge may shut down and disqualify a contestant for any unsafe practices. This decision must be made and agreed upon by two judges.

Points will be decided as follows per job:

Feeder (18) - Delivery (9) - Skew (5) - Lateral (5) - Circumferential (5) - Impression (5) – Ink sweep (5) – Finished sheets produced (25)

- Overall Quality of finished product (10) - knowledge (5)

- Clean up & Safety (3) – Bonus points for above standards (5) Identifying print issues (50)

Total possible points equal 150 points

Graphic Communications - SkillsUSA Nationals 2015

Offset Press - Sample of Press Run



Single Color Logo that contestants are responsible to print on preprinted Magazine Cover.



Preprinted Stock (Magazine Cover) two sided
Actual size of layout is 11x17

Offset Press - Judges' Score Sheet for Press Run

Contestant Number**Feeder** (18)(3pt each)

side guides - back stop - suckers - pile height
- air/vacuum - double sheet detector

Delivery (9)

Back stop – table height – use of front jogger

Printing unit 1**Skew pu1**(5)

Lateral pu1(5)

Circumferential pu1(5)

Ink Sweep pu1 (5)

Pu1

Impression (5)

Finished sheets produced

(25 possible points)(3 sheets equals 1pt up to 75 sheets)
Only Half points will be given for consistent bad sheets

Overall Quality (10 IS THE JOB SELLABLE)

Knowledge (5)

General knowledge of the printing process while operating the machine

Clean Up/Safety (3)

Bonus points for above standards (5)

Total possible points equals 100 points

Total

Offset Press - Judges' Score Sheet for Written / Printing Issues Identification

Contestant Number

Sheet A (10)

Sheet B (10)

Sheet C (10)

Sheet D (10)

Sheet E (10)

Total written points (50)

Total offset points (100)

Total points (150)

Written and Offset

Use the descriptions below to correspond to the print issue found

Lateral Issue Circumferential Issue Other Low Ink Issue Dampening Issue
Impression Squeeze Issue Under Packed Blanket Issue Over Inked Issue All issues listed

Finishing - Equipment Used: Baum Ultrafold 714XLT Air Feed Folder and Baumcut 26.4" Cutter

Purpose

Finishing was developed to replicate the bindery/finishing department of the printing industry. SkillsUSA contestants complete four sections within this rotation; cutting, folding (2 jobs), and a written test.

Cutter

Setup and operate the Baumcut 26.4" cutter to cut a four up preprinted job. SkillsUSA contestants are responsible for following instructions, make necessary adjustments to cut four 11x17 magazine covers from the parent/press sheet, perform good housekeeping, and submit completed materials to the judge.

Folder

Setup and operate the Baum Ultrafold 714 table top folder for a single fold (magazine cover) and for a letter fold (trifold brochure). SkillsUSA contestants are responsible for following instructions, make necessary adjustments to fold 11 in x 17 magazine cover in half, perform good housekeeping, and submit completed materials to the judge.

Written

On the written test, the contestants answer 25 questions on general bindery/finishing operations.



Finishing - Directions

Objectives:

- Demonstrate the ability to read instructions for a particular finishing order.
- Follow Instructions in dividing a sheet properly using a Baum paper cutter.
- Follow instructions in preparing a folded piece using a Baum folder.
- Perform good housekeeping and demonstrate good safety practices.
- Submit completed materials for assigned jobs with contestant's number.
- Complete a written finishing test, demonstrating knowledge of the finishing area.

Directions:

- You have an allowed rotation time to complete all four sections.
- When you have finished each section, submit materials and wait to be dismissed.

Job 1 Paper Cutter Sheet Division/Cutting (4-up 4/4 Sheetwise)

You have been provided with a quantity of press sheets to be divided and trimmed to four (4) separate lifts measuring 11" X 17". (25 points)

Requirements:

1. Make necessary preparations to divide press sheet to finished sheet size as required.
2. Operate cutter using program functions and controls as instructed.
3. All sheets should be submitted for review with lifts kept separate to maintain accuracy.

Job 2 Half-Fold (Conventional Folder)

You have been provided with a quantity of 11" X 17" finished size 4/4 printed brochures to be folded in half, without lip or overhang. The front of the brochure needs to be visible once folded. Twenty (20) saleable pieces should be submitted for the contest. (20 points)

Requirements:

1. Make the necessary preparations to fold the sheet into half-fold form with equal panels.
2. Operate folder using adjustments, settings and controls as instructed.
3. All Brochures should be submitted for review with a saleable material and spoilage separated.

Job 3 Letter Fold (Conventional Folder)

You have been provided with a quantity of 8.5" X 11" bond paper to be folded into a three-fold (or letter-fold), referencing bleeds and panels, if any. Twenty (20) saleable pieces should be submitted for the contest. (30 points)

Requirements:

1. Make the necessary preparations to fold the sheet into a tri-fold (letter-fold) with equal panels.
2. Operate folder using adjustments, settings and controls as instructed.
3. All Brochures should be submitted for review with a saleable material and spoilage separated.

Job 4 Written Finishing Test (Complete at workstation provided)

Complete this portion as per instructions on the test. (50 Points)

Judging

1. Following of instructions
2. Handling of materials
3. Completeness of materials submitted
4. Accuracy of finished products
5. Housekeeping and Safety
6. Correctness of responses on Written Test

Maximum 125 Points

Finishing - Judges' Score Sheet

Contestant # _____

Job 1 Paper Cutter

➤	0	2	4	6	8	10	Operation of Cutter
➤	0	2	4	6	8	10	Handling of Materials and Loading of Cutter
➤	0	2	4	6	8	10	Followed Instructions and Specifications
➤	0	2	4	6	8	10	Accuracy and Consistency of Work
➤	0	2	4	6	8	10	Housekeeping and Safety

Actual number out of 50 points possible _____

Job 2 Half-Fold

➤	0	1	2	3	4	Operation of Folder
➤	0	1	2	3	4	Handling of Materials
➤	0	1	2	3	4	Followed Instructions and Specifications
➤	0	1	2	3	4	Accuracy and Consistency of Work
➤	0	1	2	3	4	Proper Quantity

Actual number out of 20 points possible _____

Job 3 Three-Fold / Letter-Fold

➤	0	1	2	3	4	5	Operation of Folder
➤	0	1	2	3	4	5	Handling of Materials
➤	0	1	2	3	4	5	Followed Instructions and Specifications
➤	0	1	2	3	4	5	Accuracy and Consistency of Work
➤	0	1	2	3	4	5	Proper Quantity
➤	0	1	2	3	4	5	Housekeeping and Safety

Actual number out of 30 points possible _____

Job 4 Written Finishing Test

Actual number out of 50 points possible _____

Total number out of 125 points possible _____