



Celebrating 100 Years of Career Readiness

# 2018-2019 Technical Skills Assessment Drafting and Design

## Results by Standard

Legend (%)		
0-50%	51-75%	76-100%

Assessment: Idaho Drafting & Design	% Correct 16-17	% Correct 17-18	% Correct 18-19
Number tested: 27			
<b>2) CONTENT STANDARD 2.0: DRAFTING FUNDAMENTALS</b>	60.38%	61.36%	59.18%
1) Performance Standard 2.1: Geometric Constructions	65.36%	62.68%	58.00%
2.1.1. Define geometric terms and recognize various geometric shapes by name.	62.75%	50.94%	54.00%
2.1.2. Use lines, circles, and arcs to construct regular and irregular geometric shapes.	88.24%	92.45%	84.00%
2.1.4. Divide lines and bisect angles and arcs.	64.05%	62.26%	60.67%
2.1.6. Calculate area, perimeter, and volume of geometric shapes to include circle, square, rectangle, and triangle.	60.78%	61.01%	49.33%
2) Performance Standard 2.2: Measuring and Scaling Techniques	65.88%	65.66%	63.80%
2.2.1. Explain the concept of scaling of objects.	46.08%	48.11%	46.00%
2.2.2. Determine appropriate engineering, architectural, and metric scales.	62.75%	65.41%	62.67%
2.2.3. Measure object size, area, and volume utilizing appropriate industry devices.	70.59%	71.70%	72.00%
2.2.6. Determine and apply the equivalence between fractions and decimals.	81.70%	79.25%	79.33%
2.2.7. Convert between customary (i.e., SAE, Imperial) and metric systems.	62.75%	54.72%	48.00%
3) Performance Standard 2.3.: Conventional Drafting Practices	60.29%	69.81%	73.50%
2.3.1. Identify and select appropriate drafting media.	50.98%	66.04%	64.00%
2.3.5. Produce drawings from sketches.	63.73%	71.70%	73.00%
2.3.7. Demonstrate drawing revision control.	62.75%	69.81%	84.00%
4) Performance Standard 2.4.: Multi-View Drawings using Orthographic Projection	47.71%	52.58%	49.20%
2.4.1. Determine the principle view of an object.	37.25%	48.43%	44.67%
2.4.2 Identify, create, and arrange multi-view drawings.	73.86%	73.58%	76.67%
2.4.3. Identify, create, and arrange sectional views.	49.02%	54.09%	42.67%
2.4.4. Identify, create, and arrange primary auxiliary views.	43.14%	46.23%	33.00%
2.4.5. Identify multiple projection theories (first angle, third angle).	50.98%	45.28%	64.00%
2.4.6. Apply appropriate measurement units.	23.53%	38.68%	26.00%

Assessment: Idaho Drafting & Design	% Correct 16-17	% Correct 17-18	% Correct 18-19
Number tested: 27			
5) Performance Standard 2.5: Dimensions and Annotations	77.78%	68.55%	73.33%
2.5.1. Differentiate appropriate dimension standards.	62.75%	66.04%	80.00%
2.5.2. Arrange dimensions and annotations using appropriate standards.	85.29%	69.81%	70.00%
6) Performance Standard 2.6: Pictorial Drawings	35.29%	26.42%	18.00%
2.6.2. Create isometric drawings.	35.29%	26.42%	18.00%
7) Performance Standard 2.7: Hand Sketching Techniques	92.16%	89.62%	87.00%
2.7.4. Utilize the alphabet of lines.	92.16%	89.62%	87.00%
<b>3) CONTENT STANDARD 3.0: FUNDAMENTAL CADD SKILLS</b>	48.33%	50.40%	53.81%
1) Performance Standard 3.1.: Basic Computer and IT Skills	37.25%	37.74%	42.67%
3.1.5. Use industry reliable media to acquire information to complete drafting problems.	33.33%	33.02%	37.00%
3.1.6. Use Industry reliable media to acquire information to complete drafting problems.	45.10%	47.17%	54.00%
2) Performance Standard 3.2: Drawing Environment	45.10%	45.28%	46.89%
3.2.1. Select appropriate existing title blocks	98.04%	96.23%	86.00%
3.2.2. Set drafting settings	46.41%	42.77%	52.00%
3.2.3. Determine and apply scaling factors, including plotting and printing	--	41.51%	42.00%
3.2.4. Assign line weights, line types, and colors.	15.69%	32.08%	26.00%
3.2.5. Utilize template files.	49.02%	35.85%	46.00%
3.2.6. Utilize sheets/layouts for plotting/printing.	13.73%	36.79%	33.00%
3) Performance Standard 3.3: Geometric Shapes and Objects using Cartesian Coordinate System	63.73%	64.15%	64.00%
3.3.1. Describe and utilize the Cartesian Coordinate System to create geometric shapes and objects (x, y, z).	90.20%	83.02%	92.00%
3.3.2. Calculate input coordinates.	37.25%	45.28%	36.00%
4) Performance Standard 3.4: CADD Commands	64.71%	69.18%	78.67%
3.4.2. Utilize geometric relationships to ensure accuracy (i.e., endpoint, midpoint, and center.	64.71%	72.64%	81.00%
3.4.3. Utilize CADD commands to create and modify objects.	--	62.26%	74.00%
5) Performance Standard 3.5: Annotations	45.75%	50.47%	54.00%
3.5.2. Arrange text based on industry standards.	--	49.06%	66.00%
3.5.4. Arrange dimensions based on industry standards (may include dual dimensioning).	19.61%	26.42%	34.00%
3.5.5. Use industry standard symbols to annotate drawings.	58.82%	63.21%	58.00%
<b>5) CONTENT STANDARD 5.0: ARCHITECTURAL DRAFTING AND DESIGN</b>	61.76%	61.98%	68.10%
1) Performance Standard 5.1: Architectural Design	62.53%	60.21%	64.55%
5.1.1. Identify and describe different architectural styles.	64.71%	59.43%	68.50%
5.1.2. Identify construction terminology, materials and building codes.	58.17%	56.60%	53.00%
5.1.3. Identify architectural annotation standards.	64.71%	65.09%	73.00%

Assessment: Idaho Drafting & Design	% Correct 16-17	% Correct 17-18	% Correct 18-19
Number tested: 27	17	18	19
5.1.4. List and describe construction drawings.	--	67.92%	78.00%
2) Performance Standard 5.2: Architectural Views and Details related to Design Criteria	61.00%	64.15%	72.44%
5.2.1. Apply architectural design concepts to plan views.	68.63%	62.26%	68.00%
5.2.2. Create an exterior elevation from an existing floor plan.	59.48%	71.70%	80.00%
5.2.3. Create interior elevations.	94.12%	84.91%	98.00%
5.2.4. Create building sections and details.	41.83%	49.69%	56.00%
5.2.5. Produce schedules.	82.35%	66.04%	78.00%
<b>6) CONTENT STANDARD 6.0: MECHANICAL DRAFTING AND DESIGN</b>	49.58%	49.69%	50.00%
1) Performance Standards 6.1.: Drafting Concepts related to Basic Manufacturing Processes	47.71%	50.57%	45.80%
6.1.2. Describe standard machine processes.	64.71%	64.15%	56.00%
6.1.3. Utilize standard welding/machining symbols per ANSI and ASME.	42.16%	66.04%	58.00%
6.1.5. Create scaled working drawings using dimensions, tolerances, and other specifications for machine tool, fabrication, and/or welding processes.	28.10%	31.13%	31.50%
6.1.6. Create thread and fastener representations and utilize thread designations.	45.10%	37.74%	22.00%
6.1.7. Create assembly drawings with a bill of materials table.	75.49%	73.58%	69.00%
2) Performance Standards 6.2: Geometric Dimensioning and Tolerancing (GD&T) Standards	52.94%	47.92%	58.40%
6.2.1. Understand datums utilized for tolerancing.	32.35%	37.74%	47.00%
6.2.2. Utilize basic dimensioning for GD&T toleranced features.	66.67%	54.72%	66.00%