THE B.E.S.T. STANDARDS

Benchmarks for Excellent Student Thinking

EOC

FLORIDA'S END-OF-COURSE ASSESSMENTS

Geometry

Sample Test Materials
Answer Key

The B.E.S.T. Geometry Sample Test Materials Answer Key provides the correct response(s) for each item on the sample test. The sample items and answers are not intended to demonstrate the length of the actual test, nor should student responses be used as an indicator of student performance on the actual test.

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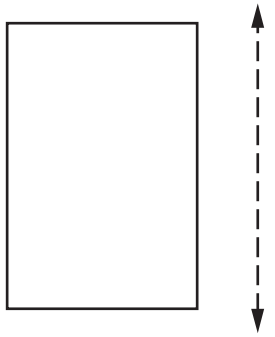
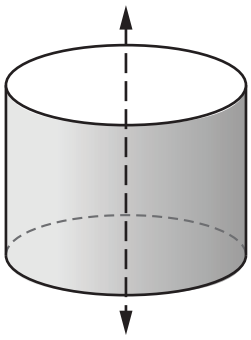
1. A rectangle and a vertical line are shown.

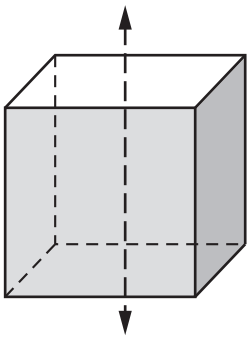


Which object is generated by rotating the rectangle about the vertical line?

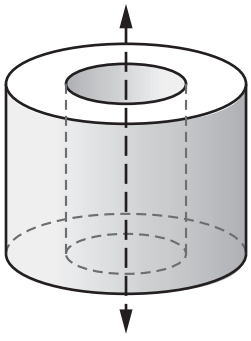
Ⓐ



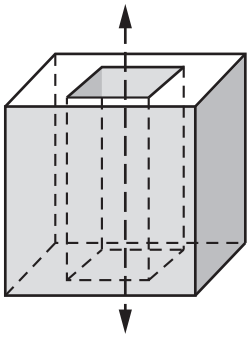
Ⓒ



●



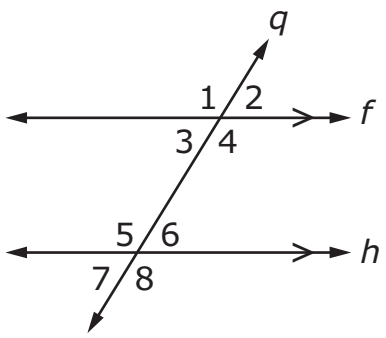
Ⓓ



Option B: **This answer is correct.** *The student determined that rotating the rectangle about a vertical line would generate a cylinder with a hole through the middle of it when the rectangle does not touch the vertical line.*

Go On

2. Lines *f* and *h* are parallel and intersected by line *q*, as shown.

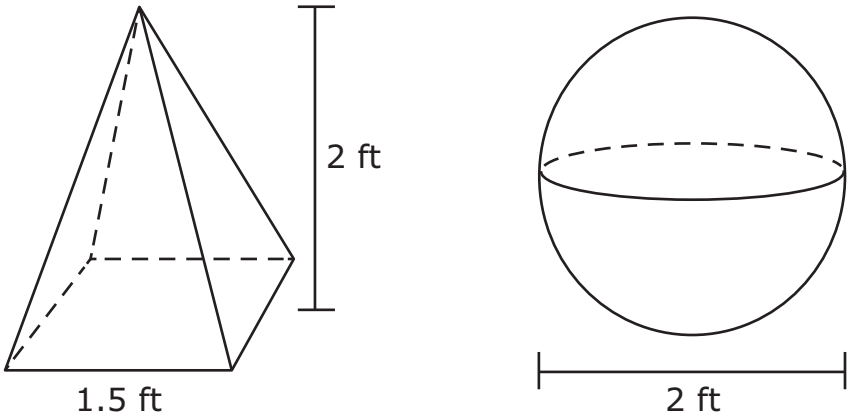


Select statements and a reason to complete the proof showing $\angle 3 \cong \angle 6$. For each blank, fill in the bubble **before** the statement or word that is correct.

Statement	Reason
1. $f \parallel h$	1. Given
2. _____ [Ⓐ $\angle 1 \cong \angle 6$ ● $\angle 2 \cong \angle 6$ Ⓒ $\angle 5 \cong \angle 6$]	2. Corresponding angles of two parallel lines cut by a transversal are congruent.
3. _____ [Ⓐ $\angle 1 \cong \angle 3$ ● $\angle 2 \cong \angle 3$ Ⓒ $\angle 5 \cong \angle 3$]	3. Vertical angles are congruent.
4. $\angle 3 \cong \angle 6$	4. _____ [Ⓐ Reflexive ● Transitive Ⓒ Symmetric] property of congruence

Go On

3. A right square pyramid and a sphere are made of marble. The dimensions of each figure, in feet (ft), are shown.



The density of marble is 160 pounds per cubic foot.

What is the difference, in pounds, between the weight of the sphere and the weight of the pyramid? Round your answer to the nearest hundredth.

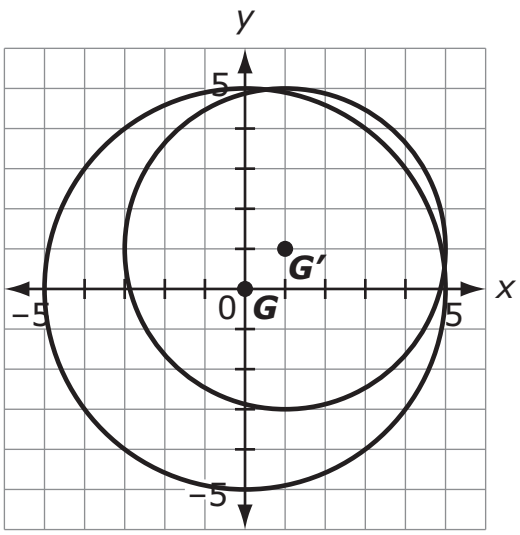
Write your response in the shaded box below.

430.21

Other correct responses: *any values between –430.48 and –429.86, or 429.86 and 430.48, inclusive*

Go On

4. The preimage and image of a circle are shown.



The center of circle G is at (0, 0), and the center of circle G' is at (1, 1). The radius of circle G is 5 units, and the radius of circle G' is 4 units.

The sequence of transformations applied to circle G to create circle G' is shown.

- $(x, y) \rightarrow (cx, cy)$
- $(x, y) \rightarrow (x + d, y + d)$

What are the values of c and d ?

Write your responses in the shaded boxes below.

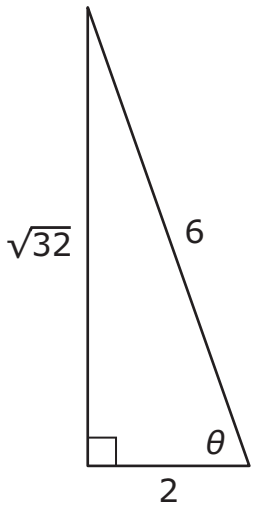
$c =$ 0.8

$d =$ 1

Other correct responses: *any equivalent values*

Go On

5. A figure is shown.

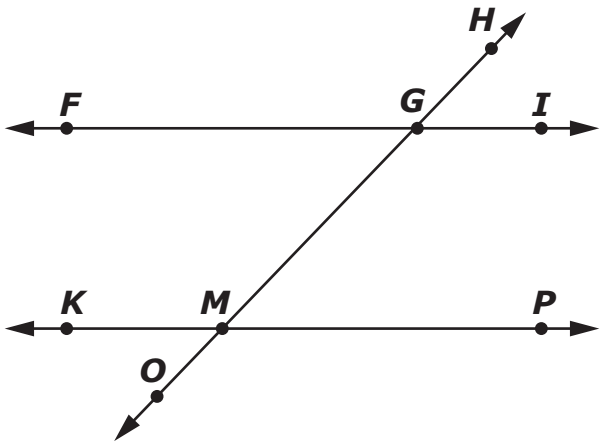


Select values to complete the trigonometric ratio. For each part of the ratio, fill in the bubble **before** the number that is correct.

$$\tan(\theta) = \frac{[\ \text{Ⓐ}\ 2\ \bullet\ \sqrt{32}\ \ \text{Ⓒ}\ 6\ ]}{[\ \bullet\ 2\ \ \text{Ⓑ}\ \sqrt{32}\ \ \text{Ⓒ}\ 6\ ]}$$

Go On

6. A diagram is shown.



Kori uses the diagram to analyze the given statement.

"When a transversal intersects parallel lines, two angles are supplementary if and only if they are adjacent angles."

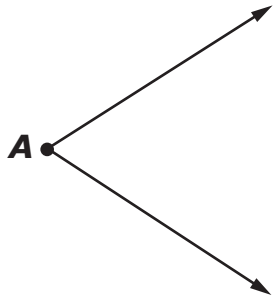
Fill in the bubble **before** one angle from each column to show a pair of angles that represents a counterexample.

Angle 1	Angle 2
● $\angle FGH$	Ⓘ $\angle FGH$
Ⓑ $\angle FGM$	Ⓙ $\angle FGM$
Ⓒ $\angle PMG$	● $\angle PMG$
Ⓓ $\angle PMO$	Ⓛ $\angle PMO$
Ⓔ $\angle HGI$	Ⓜ $\angle HGI$
Ⓕ $\angle IGM$	Ⓝ $\angle IGM$
Ⓖ $\angle KMG$	Ⓞ $\angle KMG$
Ⓗ $\angle KMO$	Ⓟ $\angle KMO$

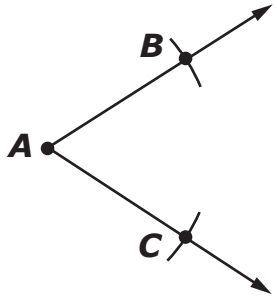
Note: *Any two supplementary angles that are not adjacent angles are acceptable.*

Go On

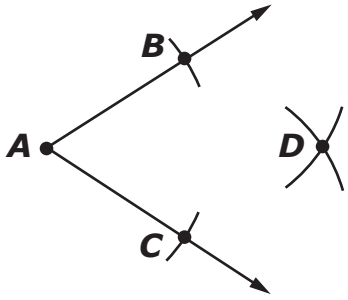
7. Angle *A* and two steps of a construction are shown.



Step 1: Place the compass at point *A* and draw arcs that intersect both rays. Label the intersections as points *B* and *C*, as shown.



Step 2: Using the same compass width from Step 1, draw intersecting arcs in the interior of the angle from points *B* and *C*. Label the intersection as point *D*, as shown.



Go On

This question has **two** parts.

Part A

Select phrases to create a true statement. For each blank, fill in the bubble **before** the phrase that is correct.

Constructing $\overline{AD}$ will create two congruent angles, _____
[Ⓐ $\angle ABC$ and $\angle ACB$ Ⓑ $\angle ABD$ and $\angle ACD$ ● $\angle BAD$ and $\angle CAD$], because $\overline{AD}$ is _____ [Ⓐ a median Ⓑ an incenter ● an angle bisector].

Part B

Select all the lengths that are equivalent to *AB*.

- ● *AC*
- Ⓑ *AD*
- Ⓒ *BC*
- ● *BD*
- ● *CD*

Part B

Option A: **This answer is correct.** *The student identified that since lengths AB and AC were created using the same arc, they are the same.*

Option D: **This answer is correct.** *The student identified that since BD was created using the same arc radius as AB, they are the same.*

Option E: **This answer is correct.** *The student identified that since CD was created using the same arc radius as AB, they are the same.*

Go On

8. Angelo transforms rectangle *PQRS* into rectangle *JKLM*. The corresponding sides of rectangles *PQRS* and *JKLM* are **not** congruent.

Select all the transformations that Angelo could have used.

Ⓐ $(x, y) \rightarrow (y, x)$

● $(x, y) \rightarrow (3x, 3y)$

Ⓒ $(x, y) \rightarrow (-y, x)$

● $(x, y) \rightarrow (1.5x, 1.5y)$

Ⓔ $(x, y) \rightarrow (x - 2, y + 3)$

Option B: **This answer is correct.** *The student correctly identified that the transformation represents a dilation of 3, which does not preserve distance.*

Option D: **This answer is correct.** *The student correctly identified that the transformation represents a dilation of 1.5, which does not preserve distance.*

Go On

9. Point $P(-1, 4)$ lies on line segment QR with endpoints $Q(1, 7)$ and $R(-9, -8)$.

Fill in bubbles to match each ratio of segment lengths to the correct numerical ratio.

	1:4	**1:5**	**4:5**
QP*:*PR	●	Ⓑ	Ⓒ
QP*:*QR	Ⓓ	●	Ⓕ

Office of Assessment
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