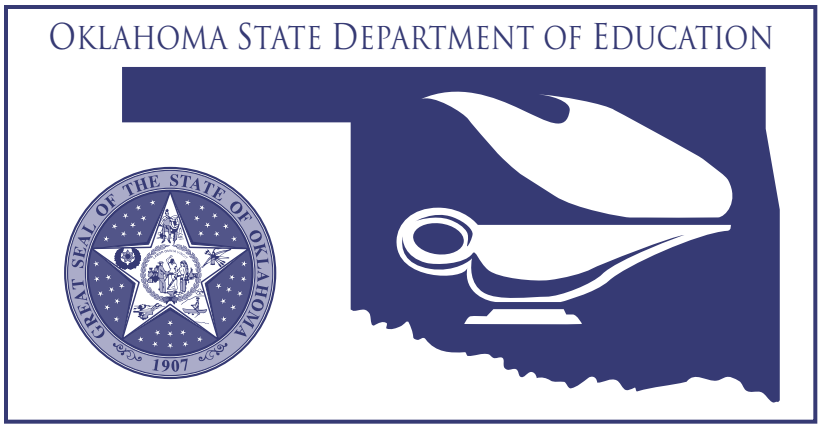
Oklahoma School Testing Program



Oklahoma Core Curriculum Tests

2010–2011 Released Items

End-of-Instruction
ACE Geometry

Oklahoma State Department of Education
Oklahoma City, Oklahoma

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Section 1

Section 1

Directions

Read each question and choose the best answer.

1 **Which sequence of statements is an example of deductive reasoning?**

A Birds have wings. A sparrow is a bird. Therefore, all sparrows have wings.

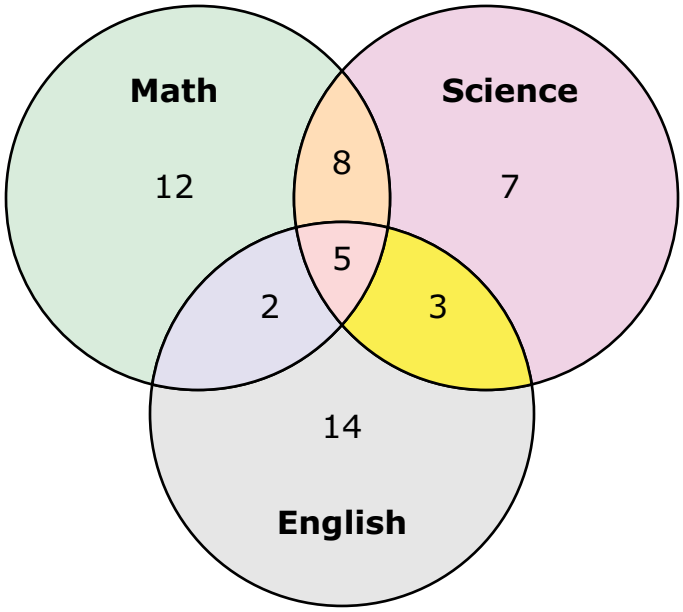
B Bananas are yellow. A banana is a fruit. Therefore, all yellow fruits are bananas.

C Trees have leaves. Trees are tall plants. Therefore, all tall plants have leaves.

D Animals have four legs. An elephant is an animal. Therefore, all animals are elephants.

2 **This Venn diagram shows the number of students who have completed homework for math, science, and English.**

Students Who Have Completed Homework



How many students have completed homework for math and science but <u>not</u> English?

F 8

G 13

H 19

J 27

Section 1

3

If Sally goes to the store, she will buy apples.

Which statement is the contrapositive of the above statement?

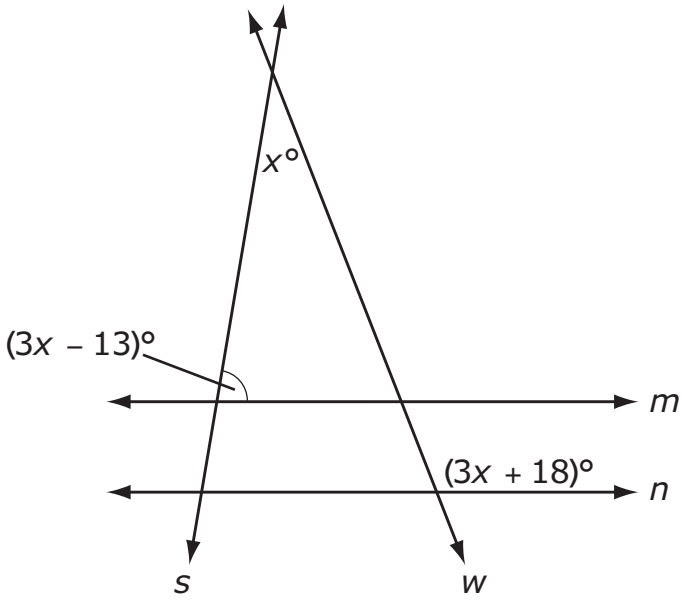
A If Sally buys apples, she did go to the store.

B If Sally goes to the store, she will not buy apples.

C If Sally does not buy apples, she did not go to the store.

D If Sally does not go to the store, she will not buy apples.

4 **Line *m* is parallel to line *n*.**



What is the value of *x*?

F 18

G 25

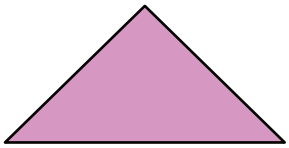
H 29

J 31

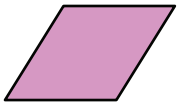
GO ON

5 **Which polygon appears to be regular?**

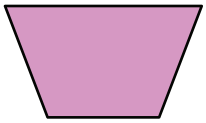
A



B



C



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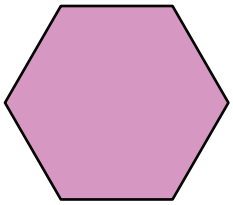
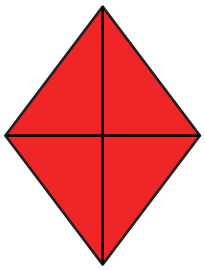


Section 1

6



Which statement must be true to prove that this rhombus is a square?

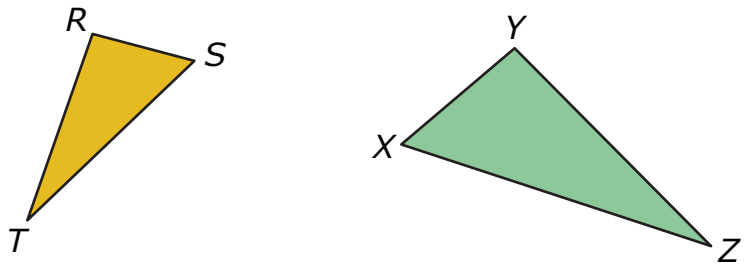
F The diagonals are congruent.

G The diagonals bisect each other.

H The diagonals are perpendicular.

J The diagonals form scalene triangles.

7



What proves that $\triangle RST$ and $\triangle YXZ$ are similar?

A $\frac{RS}{ST} = \frac{XY}{YZ}$

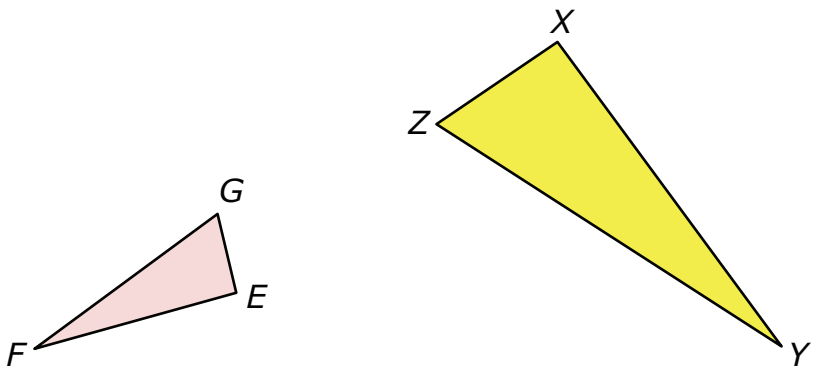
B $\frac{RS}{ST} = \frac{YZ}{XY}$

C $\angle R \cong \angle Y$ and $\angle T \cong \angle Z$

D $\angle R \cong \angle Y$ and $\angle S \cong \angle Z$

GO ON

8 $\triangle EFG$ **and** $\triangle XYZ$ **are similar.**



The measure of $\angle F$ **is 21 degrees. The measure of** $\angle G$ **is 67 degrees. What is the measure of** $\angle X$**?**

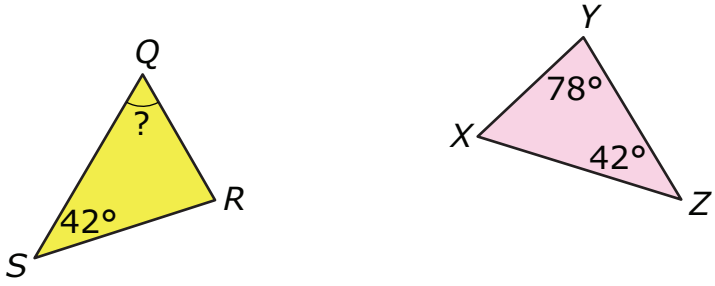
F 21°

G 67°

H 88°

J 92°

9 $\triangle QRS$ **and** $\triangle XYZ$ **are congruent.**



What is the measure of $\angle Q$**?**

A 36°

B 60°

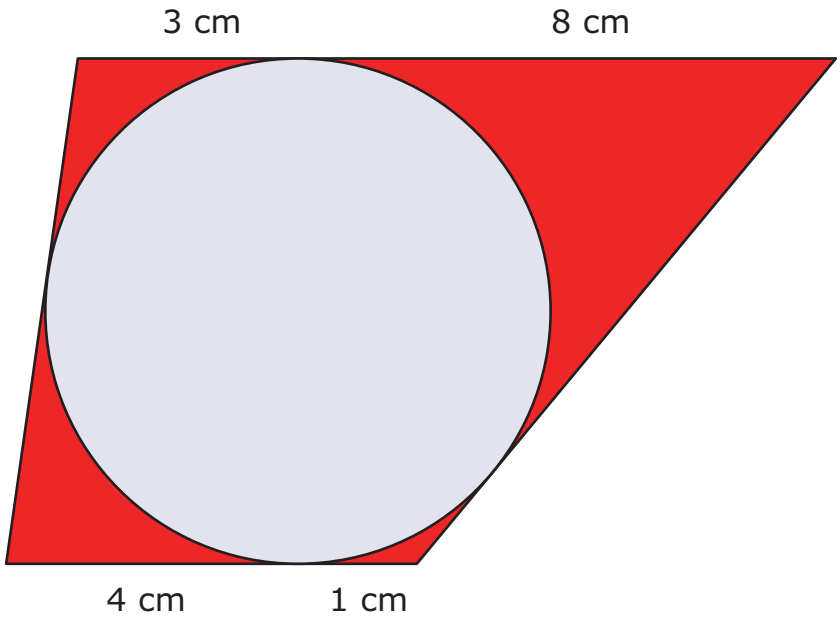
C 78°

D 84°

GO ON ▶

Section 1

10



In this figure, the circle is inscribed in the polygon. What is the perimeter of the polygon?

F 8 cm

G 16 cm

H 32 cm

J 96 cm

11 **Sam uses square tiles that measure 12 inches on each side to cover his kitchen floor. He creates a design in the center of the floor with tiles cut in half diagonally. About how long is the diagonal of one tile?**

A 6 inches

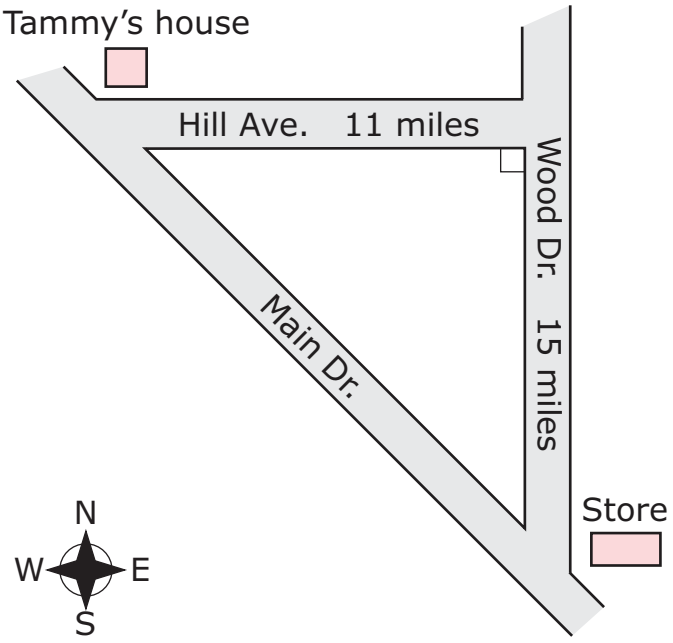
B 12 inches

C 17 inches

D 24 inches

GO ON ▶

12 **Tammy goes from her house to a store by traveling 11 miles east on Hill Avenue and 15 miles south on Wood Drive. To go home from the store, Tammy uses Main Drive.**



Tammy's route back home is about how many miles less than her route to the store?

F 7 miles

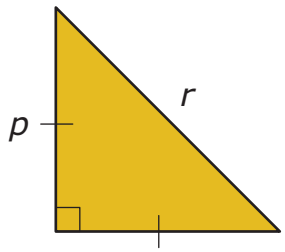
G 10 miles

H 16 miles

J 19 miles

Section 1

13 **In this triangle, $r = 8\sqrt{2}$.**



What is the value of p?

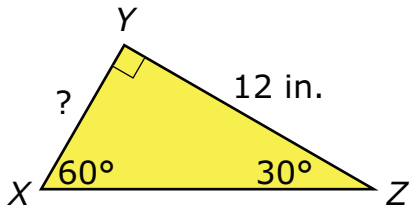
A 4

B 8

C $4\sqrt{2}$

D $8\sqrt{2}$

14



In $\triangle XYZ$, what is the length in inches of $\overline{XY}$?

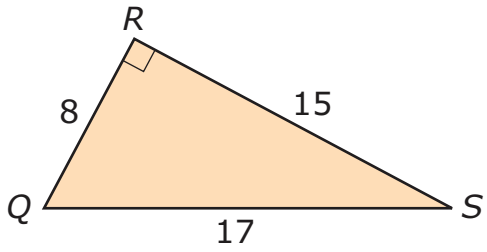
F 6 in.

G 12 in.

H $4\sqrt{3}$ in.

J $12\sqrt{3}$ in.

15



Which trigonometric function has a ratio of $\frac{8}{15}$?

A cos *Q*

B cos *S*

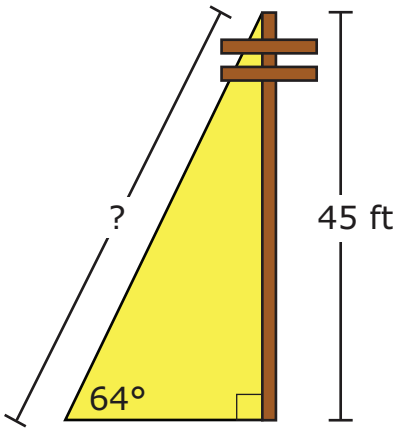
C tan *Q*

D tan *S*

GO ON

Section 1

16 **A wire is attached to the top of a 45-foot telephone pole and anchored to the ground. The angle of elevation is 64 degrees.**



How long is the wire to the nearest foot?

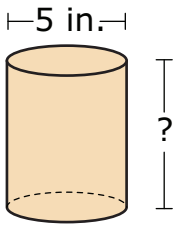
F 50 ft

G 64 ft

H 78 ft

J 106 ft

17



A cylindrical ice cream container has a volume of 117.75 cubic inches. The diameter of the container is 5 inches. What is the height of the container? (Use 3.14 for π.)

$$V = \pi r^2 h$$

A 1.5 inches

B 6.0 inches

C 7.5 inches

D 15.0 inches

Section 1

18 **The square base of a pyramid has a length of 10 centimeters. The slant height of the pyramid is 13 centimeters. The height of the pyramid is 12 centimeters. What is the volume of the pyramid?**

$$V = \frac{1}{3}Bh$$

F $100\ cm^3$

G $260\ cm^3$

H $360\ cm^3$

J $400\ cm^3$

19 **Two similar prisms have heights 6 centimeters and 10 centimeters. What is the ratio of their volumes?**

A 3:5

B 9:15

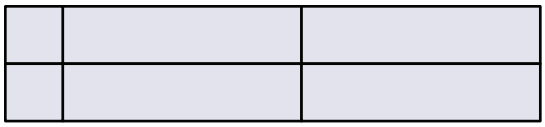
C 9:25

D 27:125

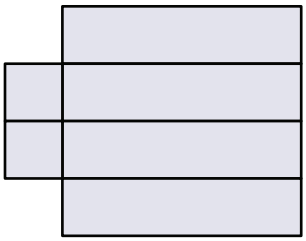
20

Which is a net of this rectangular prism?

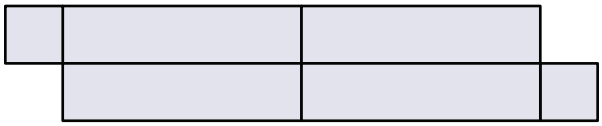
F



G



H



J

21 **Line *n* has a slope of $\frac{-1}{3}$. Line *m* is parallel to line *n*. What is the slope of line *m*?**

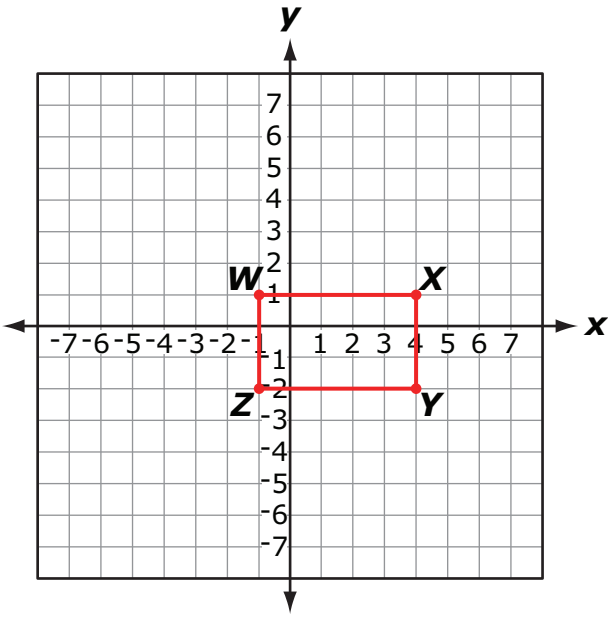
A -3

B $\frac{-1}{3}$

C $\frac{1}{3}$

D 3

22



What are the coordinates of *X'* after rectangle *WXYZ* is reflected across the *x*-axis?

F $(^{-}4,1)$

G $(1,^{-}4)$

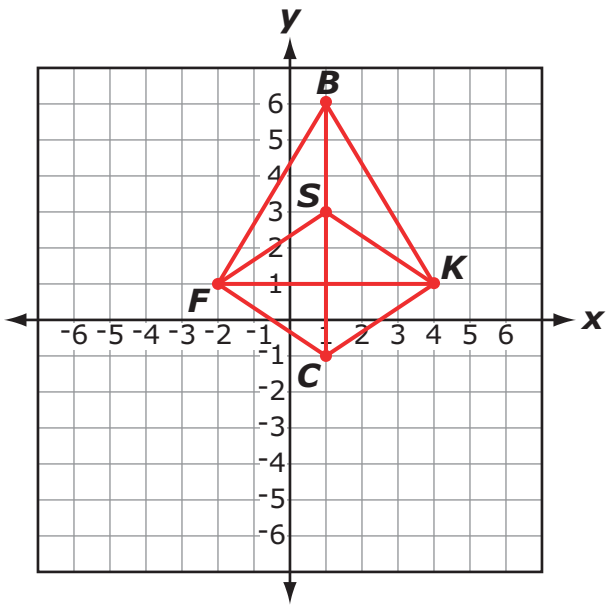
H $(4,^{-}1)$

J $(^{-}1,4)$

Use the information below to answer Numbers 23 through 25.

A television camera crew set up lights located at points *B*, *K*, and *F*, as shown. The camera is located at point *C*, and a chair is located at point *S*.

Interview Setup



Section 1

23 **What is the distance from the light located at point *F* to the light located at point *B*?**

Distance between two points $P_1(x_1, y_1)$ and $P_2(x_2, y_2)$:

$$\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

A $\sqrt{8}$

B $\sqrt{34}$

C $\sqrt{37}$

D $\sqrt{50}$

24 **The lights, camera, and chair are situated so that quadrilateral *FSKC* is a rhombus. Which statement must also be true?**

F $\overline{KF} \cong \overline{SC}$

G $m\angle SFC = 90°$

H $\Delta SFC \cong \Delta SKC$

J $2(m\angle KCS) = 90°$

25 $\overline{FC}$ **is parallel to** $\overline{SK}$**, and** $\overline{FS}$ **is parallel to** $\overline{KC}$**. If the measure of** $\angle KCS$ **is about 56°, what is the approximate measure of the complement of** $\angle FSC$**?**

A 34°

B 45°

C 56°

D 124°

STOP

STOP

END OF SECTION 1

527906 1 2 3 4 5 A B C D E Printed in the USA ISD1621