Oklahoma School Testing Program

OKLAHOMA
STATE DEPARTMENT *of* EDUCATION

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STATE SUPERINTENDENT
of PUBLIC INSTRUCTION
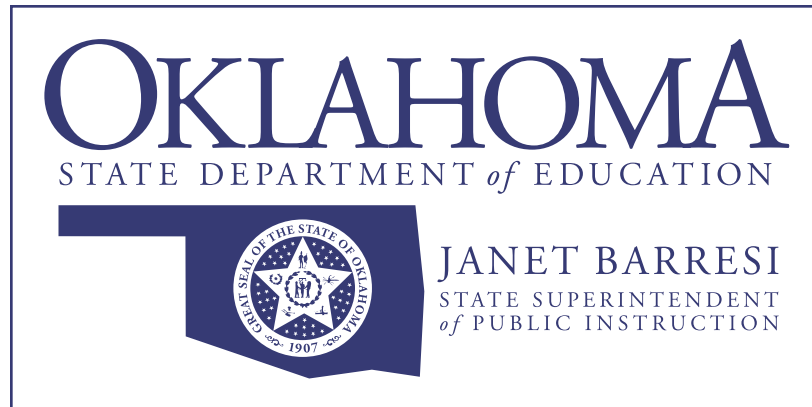
Oklahoma Core Curriculum Tests

2011–2012
Released Items

End-of-Instruction
ACE Geometry

Oklahoma State Department of Education
**Oklahoma City, Oklahoma**

Section 1

Directions

Read each question and choose the best answer.

1 **Stephen, Jon, and Pablo finished the 200-meter dash in the first three places. If Jon finished before Stephen, and Stephen did not finish 3rd, in which order did Stephen, Jon, and Pablo finish?**

A Jon: 1st, Stephen: 2nd, Pablo: 3rd

B Jon: 1st, Pablo: 2nd, Stephen: 3rd

C Stephen: 1st, Pablo: 2nd, Jon: 3rd
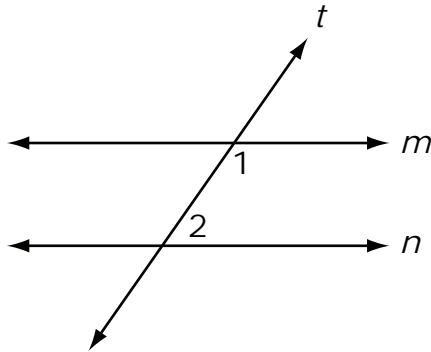
D Stephen: 1st, Jon: 2nd, Pablo: 3rd

2 **Transversal *t* cuts parallel lines *m* and *n*.**
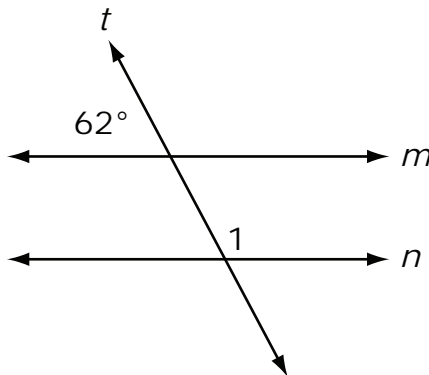
What is the measure of ∠1?
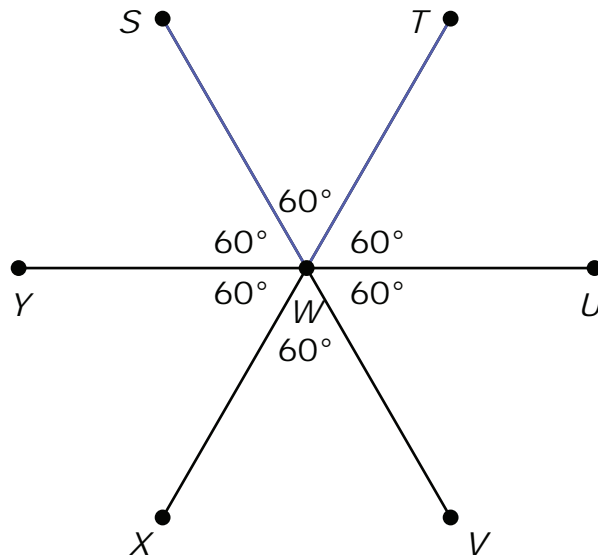
F 118°

G 121°

H 152°

J 162°

3

Which statement <u>must</u> be true about ∠1 and ∠2 in order for line *m* and line *n* to be parallel?

A   Their measures must be equal.

B   Their measures must be supplementary.

C   Their measures must be complementary.

D   The measure of ∠1 must be greater than the measure of ∠2.

4

S ●   T ●

60°

60°   60°

Y ●————————●———————— U

60°   60°

W

60°

X ●   ● V

Which angle is vertical to ∠SWT?

F   ∠SWY

G   ∠TWU

H   ∠YWX

J   ∠XWV

5

3 cm   3 cm

3 cm   3 cm

5 cm
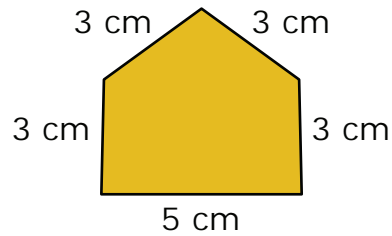
What type of figure is shown?

A   convex hexagon

B   convex pentagon

C   concave hexagon

D   concave pentagon

6 **The perimeter of a square, in centimeters, is equal to the circumference of a circle in centimeters. The radius of the circle is 3 centimeters. To the nearest square centimeter, what is the area of the square? (Use 3.14 for π.)**

$$C = 2\pi r$$

F 6 cm^2

G 19 cm^2

H 22 cm^2

J 50 cm^2

GO ON ▶

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7 If △*RST* and △*XYZ* are similar scalene triangles, which of the following statements is **not** true?

A $\angle R \cong \angle X$

B $\angle T \cong \angle Y$

C $\dfrac{RS}{XY} = \dfrac{ST}{YZ}$

D $\dfrac{RT}{ST} = \dfrac{XZ}{YZ}$

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8 The ratio of the perimeter of rectangle P to the perimeter of rectangle Q is 2:5. The area of rectangle P is 12 square feet. What is the area of rectangle Q?
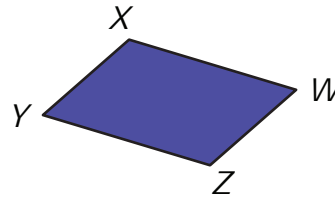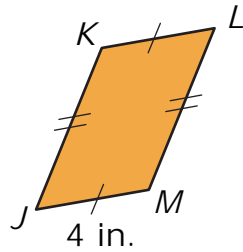
F 1.92 square feet

G 4.80 square feet
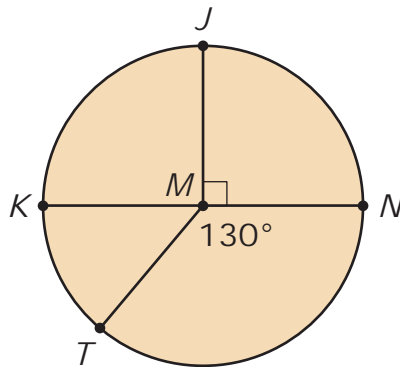
H 30.00 square feet

J 75.00 square feet

9 Parallelograms *JKLM* and *WXYZ* are congruent. The perimeter of *JKLM* is 20 inches.

What is the length of $\overline{WX}$?

A   5 inches

B   6 inches

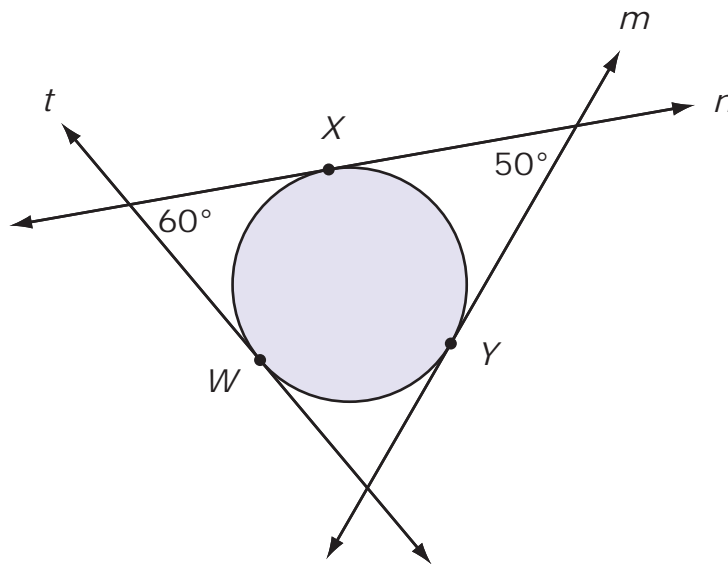**C**   12 inches

D   16 inches

10

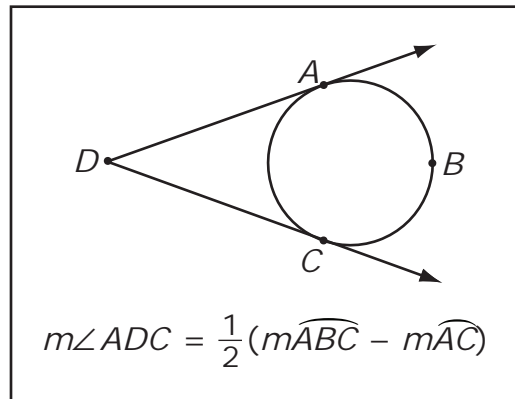In this circle, *M* is the center, and $\overline{KN}$ is a diameter. What is the measure of arc *NT*?

F   65°

G   90°

H   130°

J   210°

GO ON ▶

11 Lines *t*, *m*, and *n* are tangent to the circle at *W*, *Y*, and *X*.

What is the measure of $\overarc{WY}$?

$$m\angle ADC = \frac{1}{2}(m\overarc{ABC} - m\overarc{AC})$$

A 100°

B 110°

C 120°

D 130°

12 **Triangle *RST* is an acute triangle.**
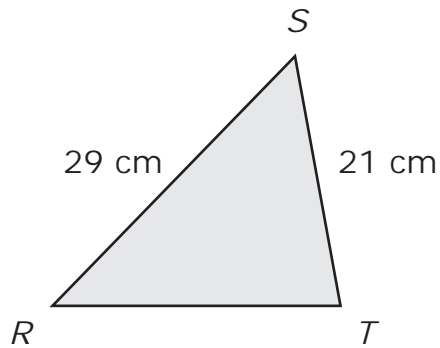
Which measurement could be the length of $\overline{RT}$?

F 12 cm

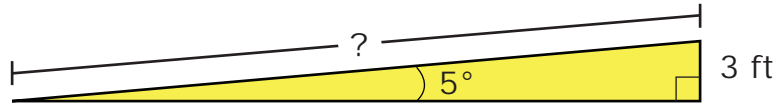**G** 15 cm

H 20 cm

J 24 cm

13 **The diagram shows the dimensions of a parking space in the shape of a parallelogram.**

60°

20 ft

8.5 ft
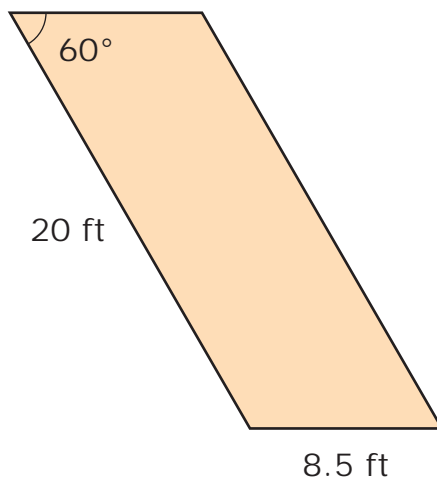
What is the approximate area of the parking space?

A 62.6 square feet

B 120.2 square feet

C 147.2 square feet

D 170.0 square feet

GO ON ▶

14 **A ramp is 3 feet high. The angle of elevation is 5 degrees.**

How long is the ramp to the nearest foot?

$$\sin 5° \approx 0.087$$
$$\cos 5° \approx 0.996$$
$$\tan 5° \approx 0.087$$

F   5 ft

G   16 ft

H   20 ft

J   34 ft

15
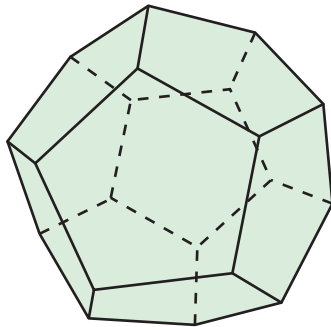
Which type of polyhedron is shown?

A decahedron

**B** dodecahedron

C hexahedron

D pentahedron

16 Heather uses a cone-shaped bag to hold hot chocolate mix. The bag has a height of 18 centimeters and a radius of 3 centimeters. What is the volume of the hot chocolate mix in terms of π ?

$$V = \frac{1}{3}\pi r^2 h$$

F 36π cm^3

G 54π cm^3

H 108π cm^3

J 162π cm^3

17 Two similar regular polyhedra have surface areas 16 cm^2 and 64 cm^2. What is the ratio of their edge lengths?

A   1:2

B   1:4

C   1:8

D   1:16

GO ON ▶

GO ON ▶

18 Which net <u>best</u> represents a cube?

F

G

H

J
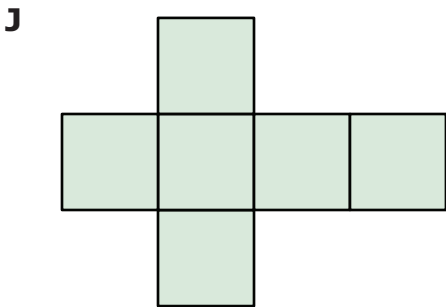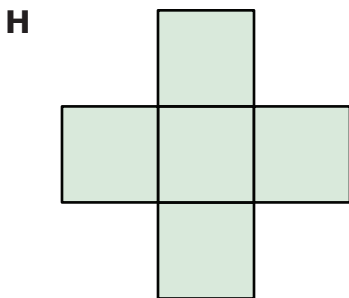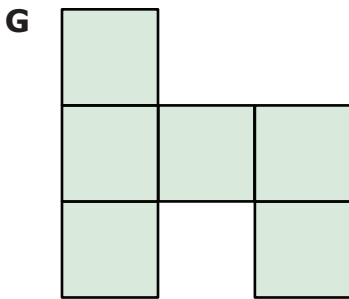
19 Kendra drew line *p* on this coordinate system.
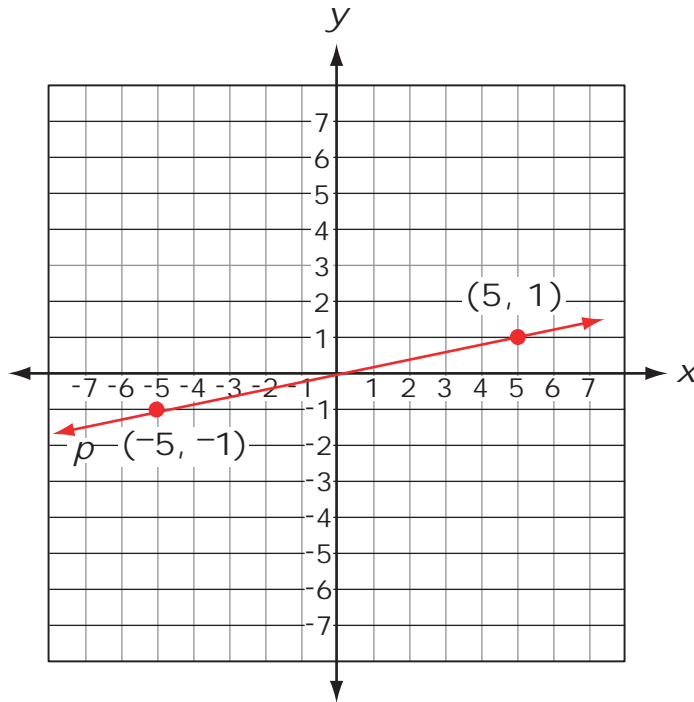
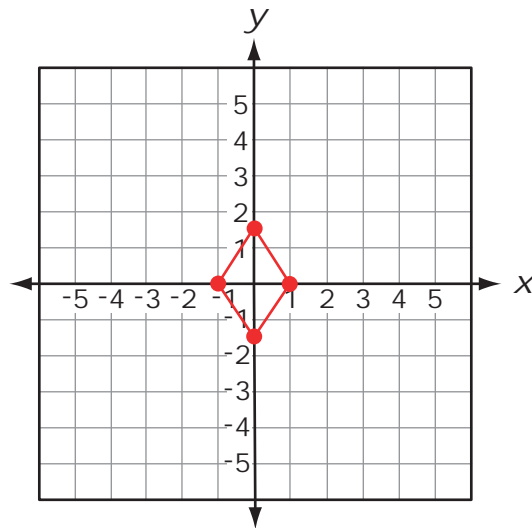
Which equation represents a line that is parallel to the line Kendra drew?

A $y = 5x - 1$

B $y = {}^{-}5x + 1$

C $y = \frac{1}{5}x - 3$

D $y = \frac{{}^{-}1}{5}x + 2$

20 **Ethan drew this shape on the coordinate system. He wants to use a transformation that will change the position of the shape.**

Which transformation should Ethan perform?

F   reflection across the *x*-axis

G   reflection across the *y*-axis

H   rotation of 90° clockwise about the origin

J   rotation of 180° counterclockwise about the origin

STOP

Oklahoma End-of-Instruction
2011-2012 Released Items Answer Key
ACE Geometry

Item Number	Correct Answer	Standard	Objective	Skill
1	A	1	1	
2	F	2	2	a
3	B	2	2	b
4	J	2	2	c
5	B	2	3	a
6	H	2	3	d
7	B	2	4	a
8	J	2	4	b
9	B	2	5	b
10	H	2	6	a
11	B	2	6	b
12	J	3	1	
13	C	3	2	
14	J	3	3	
15	B	4	1	a
16	G	4	1	b
17	A	4	2	
18	J	4	3	
19	C	5	1	
20	H	5	2	b