GCA #3

1. If $FN = 29$, what is the value of r?

$$\underset{F}{\bullet}\xrightarrow{\quad 4r-3 \quad}\underset{H}{\bullet}\xrightarrow{\quad r+7 \quad}\underset{N}{\bullet}$$

- A. 4
- B. 5
- C. 6
- D. 7
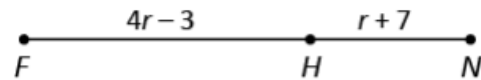
2. Line p intersects lines a and b. $a \parallel b$. By which theorem is $\angle 1 \cong \angle 8$?
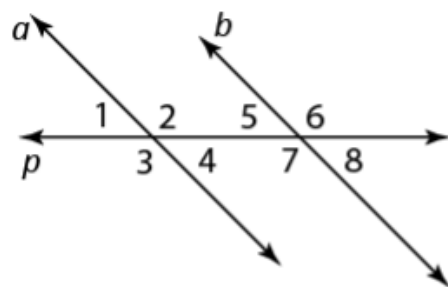
- A. Alternate Exterior Angles Theorem
- B. Alternate Interior Angles Theorem
- C. Corresponding Exterior Angles Theorem
- D. Corresponding Interior Angles Theorem

3. If a number is an integer, then it is either positive or negative.
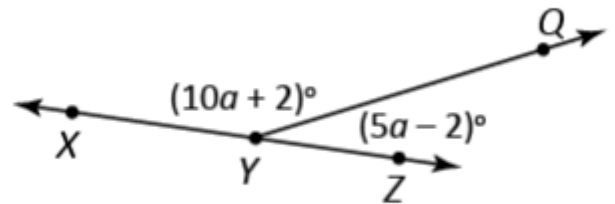
Which is the hypothesis of the conditional?

- A. A number is an integer.
- B. A number is either positive or negative.
- C. A number is both positive and negative.
- D. A number is not an integer.

4. Fill in the blanks.

Parallel lines are in the same [Choose... ▼], but they do not [Choose... ▼].
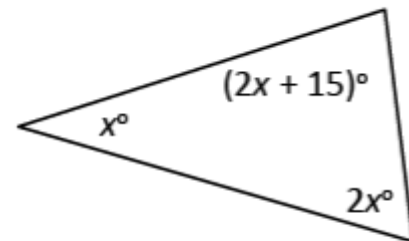
Choose...
figure
plane
angle
reflection

Choose...
translate
intersect
reflect
correspond

5. What is $m\angle XYQ$?

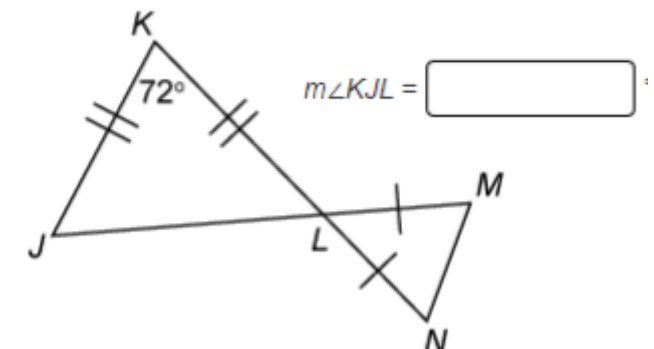$m\angle XYQ = $ [___] °

6. What is the value of x?

- A. 24
- C. 72
- B. 33
- D. 75

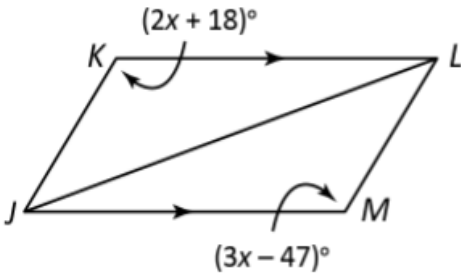**7.** What rigid motion maps the solid-line figure onto the dotted-line figure?
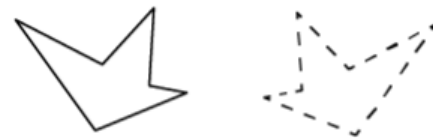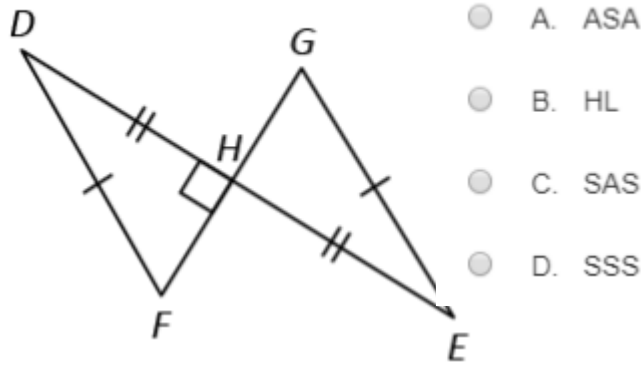

- A. reflection
- B. rotation
- C. translation

8.

$m\angle KJL = $ [___]

9. To show that △JKL ≅ △LMJ by AAS, what must be the value of x?

$(2x + 18)°$

K, L

J, M

$(3x − 47)°$

10. By which theorem can you conclude △DHF ≅ △EHG?

D

G

H

F

E

- A. ASA
- B. HL
- C. SAS
- D. SSS

11 What is the length of DF?

F

3a

G

a + 6

E

D

a=
3a=
a+6=

DF = [   ]
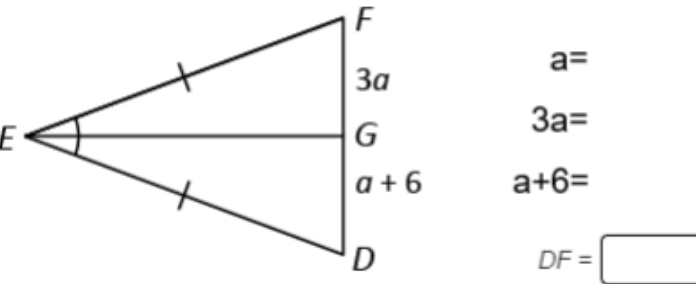
12 Which lists the sides of △XYZ from shortest to longest?

Y

58°

63°

X

Z
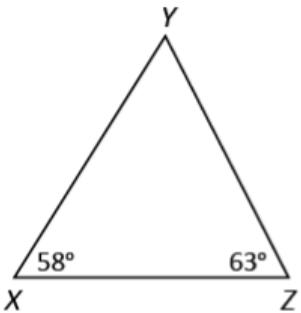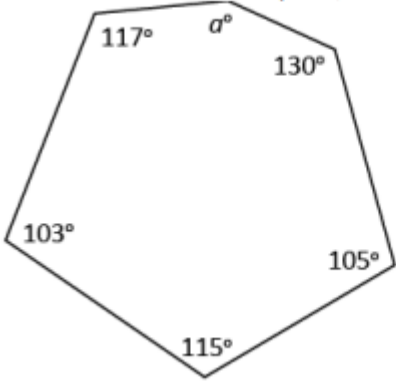
- A. $\overline{YZ}, \overline{XZ}, \overline{XY}$
- B. $\overline{XY}, \overline{XZ}, \overline{YZ}$
- C. $\overline{XZ}, \overline{YZ}, \overline{XY}$
- D. $\overline{XY}, \overline{YZ}, \overline{XZ}$

13. A triangle has two sides with lengths 31 centimeters and 39 centimeters. Which best describes the length of the third side?

- A. less than 8 cm
- B. greater than 70 cm
- C. less than 8 cm or greater than 70 cm
- D. greater than 8 cm and less than 70 cm

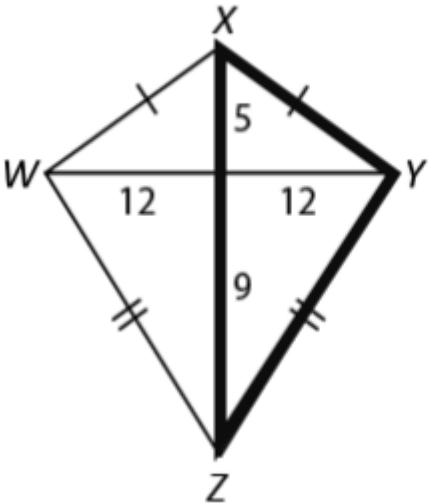**14.** What is the value of a? (First, find the sum of the interio

117°
$a°$
130°
103°
105°
115°

- A. 113
- B. 150
- C. 210
- D. 330

15. What is the measure of an interior angle of a regular 16-gon?

- A. 16.0°
- B. 22.5°
- C. 157.5°
- D. 205.7°

16. What is the perimeter of △XYZ?

X

5

W

12   12

Y

9

Z

- A. 28
- B. 42
- C. 50
- D. 54

17. Quadrilateral *PQRS* is shown.
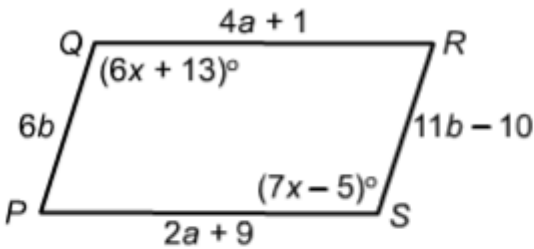
What must the values of *a* and *b* be for *PQRS* to be a parallelogram?

- A. $a = 2, b = 5$
- B. $a = 17, b = 12$
- C. $a = 4, b = 2$
- D. not enough information

18. Is each statement true for all rectangles?

Diagonals are congruent.	Choose... ▾	No or Yes
Diagonals bisect opposite angles.	Choose... ▾	No or Yes
Diagonals are perpendicular.	Choose... ▾	No or Yes

19. Which additional piece of information would show that quadrilateral *WXYZ* is a rhombus'

- A. $EX = EZ$
- B. $WX \parallel YZ$
- C. $XZ \perp WY$
- D. $XY = WZ$

20. Give the most precise classification for each figure.

- A. quadrilateral
- B. parallelogram
- C. trapezoid
- D. kite