# FCPS Geometry Common Assessment 4     Name _____

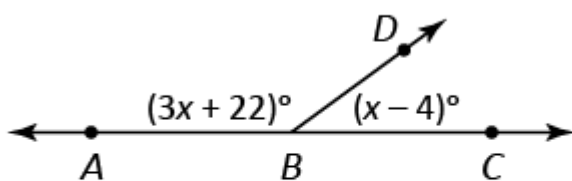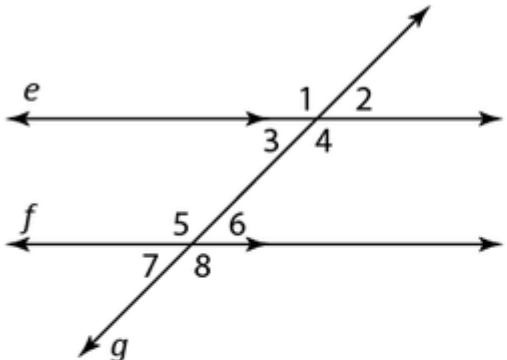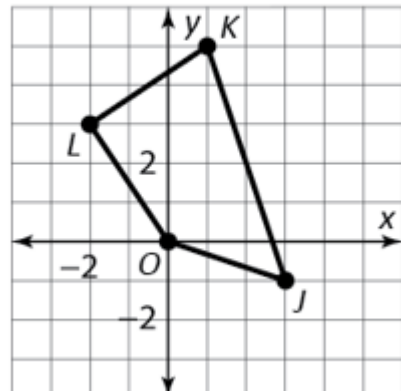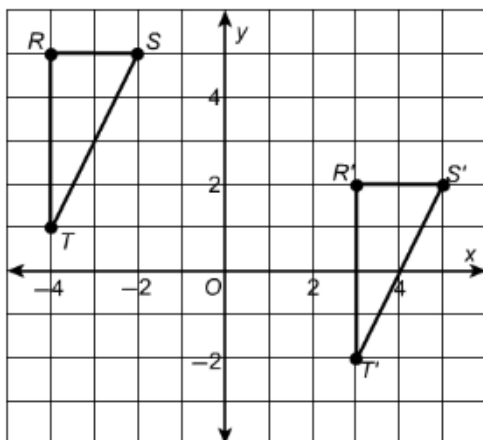| # | Question |
|---|----------|
| 1 | Point $D$ is in the interior of $\angle ABC$.  What is $m\angle DBC$?  $m\angle DBC = (x-4)^\circ = \boxed{\phantom{xxxx}}^\circ$ |
| 2 | Which angle is congruent to $\angle 8$? Select all that apply.    (Choose 2 answers!)  ☐  A.  $\angle 1$  ☐  B.  $\angle 2$  ☐  C.  $\angle 3$  ☐  D.  $\angle 4$ |
| 3 | **Use quadrilateral JKLO.**  What are the coordinates of the image $R_{y\text{-axis}}(JKLO) = J'K'L'O'$? $J' = ( \boxed{\phantom{xxxxxxxx}} )$ $K' = ( \boxed{\phantom{xxxxxxxx}} )$ $L' = ( \boxed{\phantom{xxxxxxxx}} )$ $O' = ( \boxed{\phantom{xxxxxxxx}} )$ |

**4**

What is a rule for the translation of ΔRST to ΔR'S'T' ? Select all that apply.



- ☐ A.  $T_{(-7, 3)}$

- ☐ B.  7 units down; 3 units right

- ☐ C.  7 units right; 3 units down

- ☐ D.  $T_{(7, -3)}$
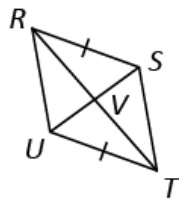
**(Choose 2 answers!!)**

**5**
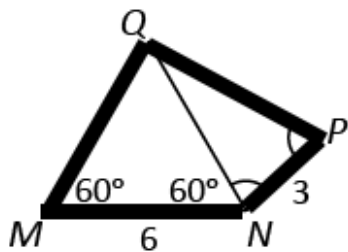


What is the perimeter of quadrilateral of *MNPQ*?

perimeter of *MNPQ* = ☐

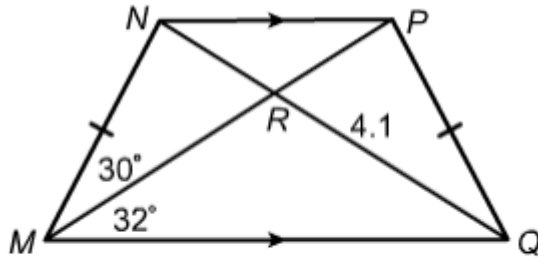**6**

Refer to the diagram shown.



If $\overline{SU}$ and $\overline{RT}$ bisect each other, which theorem(s) can be used to show that ΔRSV ≅ ΔTUV? Select all that apply.

- ☐ A.  ASA

- ☐ B.  SSS

- ☐ C.  SAS

- ☐ D.  AAS

**Choose 2 answers!**

**7**

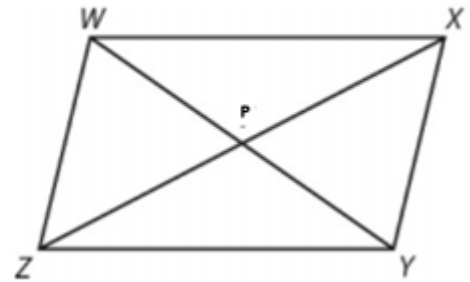Quadrilateral *MNPQ* is shown.



If *MP* = 5.9, what is *RN*?

- A. 1.8
- B. 3.8
- C. 4.1
- D. not enough information

**8**

The diagonals of parallelogram *WXYZ* intersect at *P*. Which statement must be true? Select all that apply.

A. $\overline{WP} \cong \overline{YP}$

B. $\overline{XY} \cong \overline{WZ}$

C. $\angle YWZ \cong \angle WYX$

D. $m\angle WXY + m\angle YZW = 180°$

**Choose 3 answers!!**



**9**

How do the angles and side lengths of the preimage relate to the corresponding angles and side lengths of the image of a dilation with a scale factor not equal to 1?

- A. The angles are proportional and the side lengths are congruent.
- B. The angles are proportional and the side lengths are proportional.
- C. The angles are congruent and the side lengths are congruent.
- D. The angles are congruent and the side lengths are proportional.

**10**

The point *A* has coordinates *A*(2, 4). What are the coordinates of *A'* for the dilation $D_{1.5}(A)$?
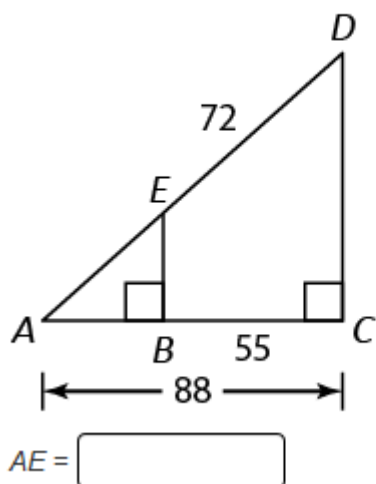
*A'* ( [    ] )

**11**

The image of a figure that undergoes one or more rigid motions and a dilation is always [ Choose... ▼ ] its preimage.
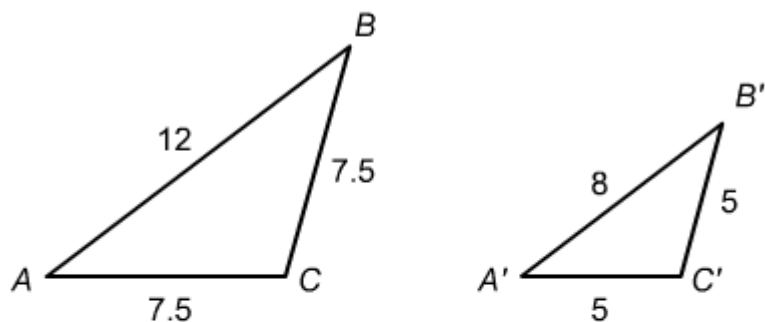
Choose...
congruent to
similar to

**12** Given △ADC and △AEB, What is AE?  Find AB first.



$$72$$

A   B   55   C
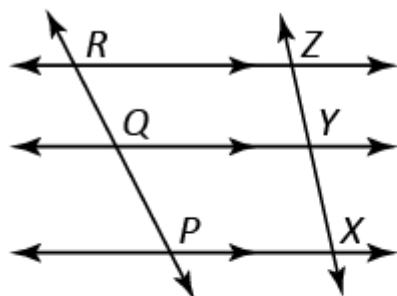
|← 88 →|

AE = [          ]

**13** What is the scale factor of the dilation shown?



- A.  $\dfrac{1}{2}$

- B.  $\dfrac{2}{3}$
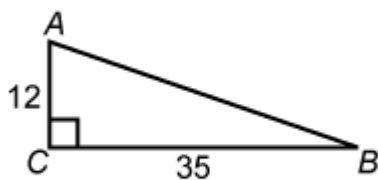
- C.  $\dfrac{3}{4}$

- D.  $\dfrac{3}{2}$

**14**

Which conclusion does the diagram support?



- A. $\dfrac{PQ}{QR} = \dfrac{XY}{YZ}$

- B. $PX = \dfrac{1}{2} RZ$

- C. $\dfrac{QY}{RZ} = \dfrac{PX}{QY}$

- D. $QY = \dfrac{1}{2} PX$

**15**

What is *AB?*



$AB =$ [ ]

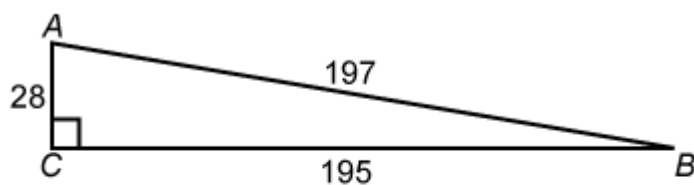**16**

Choose the words to make a true sentence.

A segment whose endpoints are the midpoints of two sides of a triangle is [ Choose... ▼ ] the third side and

| Choose... |
|---|
| twice the length of |
| half the length of |
| the same length as |

[ Choose... ▼ ] to the third side.

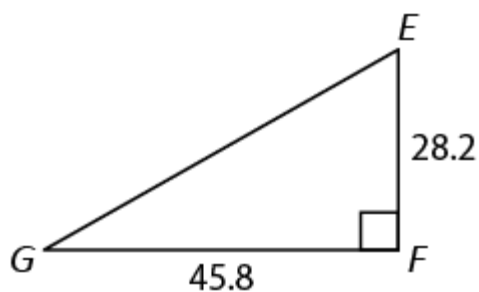| Choose... |
|---|
| parallel |
| adjacent to |
| perpendicular to |

**17**

Which is the cosine ratio of ∠A?



- A. $\dfrac{195}{197}$
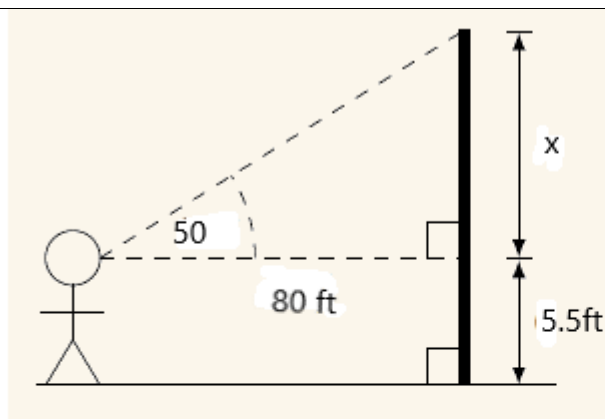- B. $\dfrac{28}{197}$
- C. $\dfrac{28}{195}$
- D. $\dfrac{195}{28}$

**18**

Which value is equal to $\dfrac{1}{2}$ ? Select all that apply.  **(Choose 2 answers!!)**

- A.  sin 30°
- B.  cos 45°
- C.  tan 30°
- D.  sin 45°
- E.  cos 60°
- F.  tan 45°

**19**

What is $m\angle G$ to the nearest tenth?



$m\angle G = \boxed{\phantom{xxxxx}}$ °

**20**



50

80 ft

X

5.5ft

The angle of elevation from a viewer to the top of a flagpole is 50°.  The viewer is 80 ft away and the viewer's eyes are 5.5 ft from the ground.  How high is the pole to the nearest tenth of a foot?

First find x then find the height of the pole.

height = [                    ] ft