Question Number	Question
1	If $m\angle NOP = 24°$ and $m\angle NOQ = 110°$, what is $m\angle POQ$? ○ A. 62° ○ B. 86° ○ C. 134° ○ D. 156°
2	What is the value of x? $(x + 35)°$ $(3x + 1)°$ $x =$ [＿＿＿＿]
3	Which pairs of angles are alternate interior angles? Select all that apply. □ A. $\angle 3$ and $\angle 6$ □ B. $\angle 3$ and $\angle 8$ □ C. $\angle 4$ and $\angle 5$ □ D. $\angle 4$ and $\angle 7$ □ E. $\angle 1$ and $\angle 8$

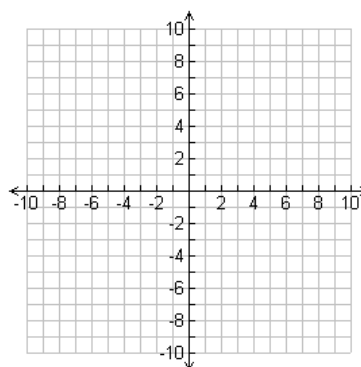|	
4	If $a \parallel b$ and $m\angle 2 = 71°$, what is $m\angle 1$? ○ A. 19° ○ B. 71° ○ C. 109° ○ D. 142°
5	Which equation represents a line that is perpendicular to the line with equation $y = 2x - 8$? Select all that apply. ☐ A. $y = \frac{1}{2}x + 1$ ☐ B. $y = -\frac{1}{2}x + 1$ ☐ C. $x + 2y = 5$ ☐ D. $-x + 2y = -3$ ☐ E. $-x - 2y = 9$ (Hint: there are more than two correct answers)
6	If point B has coordinates $(-8, 1)$, what are the coordinates of the point when it is reflected across the y-axis? ○ A. $(8, 1)$ ○ B. $(-8, -1)$ ○ C. $(-8, 1)$ ○ D. $(8, -1)$
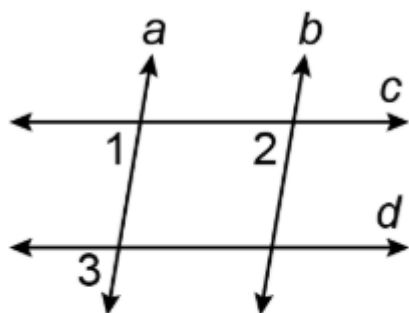
7

What translation rule maps $ABCD$ to $A'B'C'D'$?
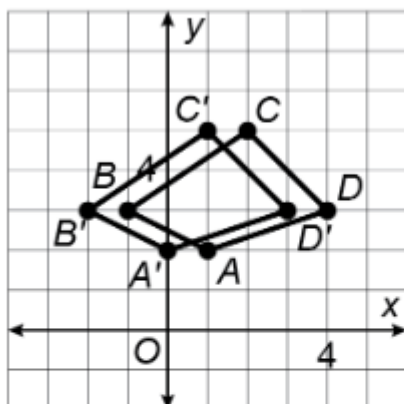
- A. $T_{\langle -1, 0\rangle}$
- B. $T_{\langle 1, 0\rangle}$
- C. $T_{\langle 0, -1\rangle}$
- D. $T_{\langle 0, 1\rangle}$

8

Triangle ABC has vertices $A(1, 3)$, $B(2, 5)$, and $C(5, 3)$. What are the coordinates of B' after the translation described by the rule $T_{\langle 1, 4\rangle}$?

$B' = ($ [　　　　] $)$

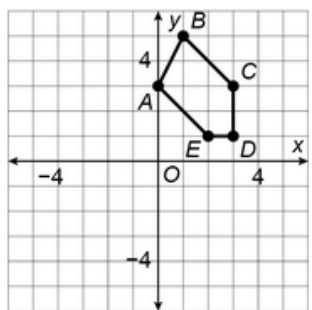Your answer should be ONLY numbers, separated by a comma, with NO parentheses and NO space.

9
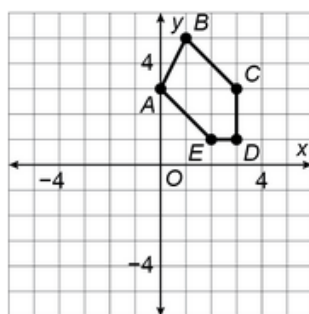
Use pentagon $ABCDE$.

What are the coordinates of B' after the pentagon is rotated 90° about the origin?
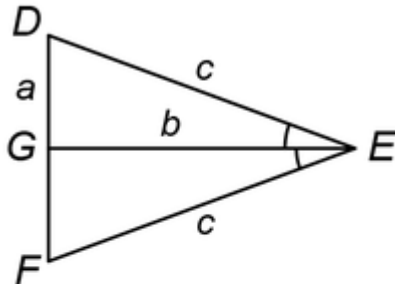
- A. $(1, 5)$
- B. $(-1, 5)$
- C. $(-5, 1)$
- D. $(5, 1)$

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Use pentagon $ABCDE$.
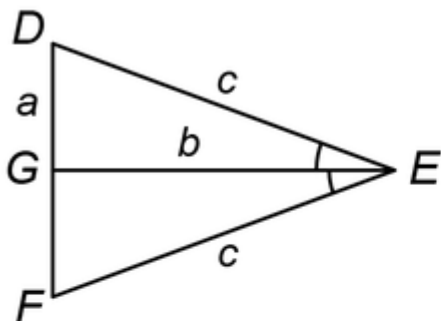

What are the coordinates of E' after the pentagon is rotated 270° about the origin?

- A. $(1, -2)$
- B. $(1, 2)$
- C. $(2, -1)$
- D. $(2, 1)$

11	How many lines of symmetry does a regular decagon have? ○ A. 2 ○ B. 5 ○ C. 10 ○ D. 12
12	Which letter has rotational symmetry? ○ E ○ B ○ Z ○ V
13	Triangle *JKL* is reflected across the *y*-axis to create Triangle *J'K'L'*. Choose the words to create a true statement. The two triangles [Choose... ⌄] congruent because the transformation is a rigid transformation, which [Choose... ⌄] the lengths of the sides and measures of all angles. | Choices for first blank...		Choices for second blank...
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are not		changes
are		preserves	
14	Use *DEF*. What is *m∠DFE* if *m∠DEG* = 18°? ○ A. 9° ○ B. 18° ○ C. 36° ○ D. 72°

Use DEF.
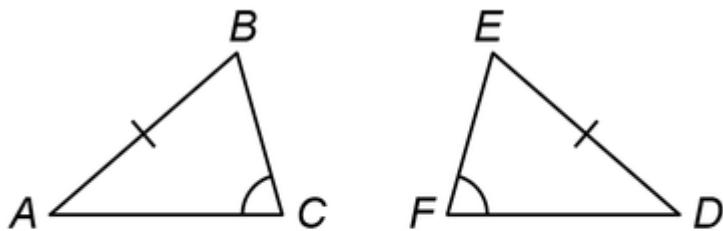

Given that $m\angle EGF = 90°$, what is the value of b if a = 9 and c = 41?
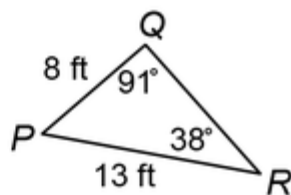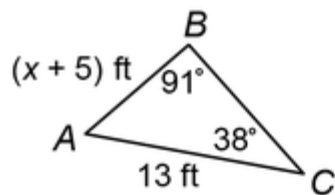
○ A. 32

○ B. 40

○ C. 42

○ D. 50

Which criterion can be used to prove the triangles are congruent?

○ A. SSS

○ B. SAS

○ C. SSA

○ D. none of these

What is the value of x?

x = [   ]
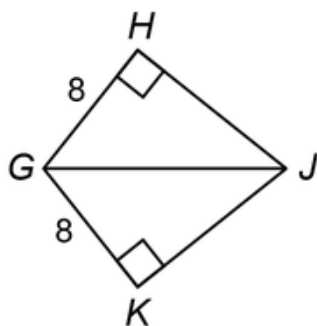
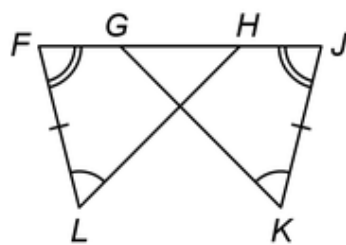|	
18	Which criteria can be used to prove triangles are congruent? Select all that apply. ☐ A. ASA ☐ B. AAS ☐ C. SAS ☐ D. SSA ☐ E. HL (Hint: There are more than two correct answers)
19	Which theorem can you use to prove that *GHJ* and *GKJ* are congruent? ○ A. ASA ○ B. SAS ○ C. SSS ○ D. HL
20	 Which side is congruent to $\overline{GK}$? ○ A. $\overline{HL}$ ○ B. $\overline{FJ}$ ○ C. $\overline{FL}$ ○ D. $\overline{HF}$