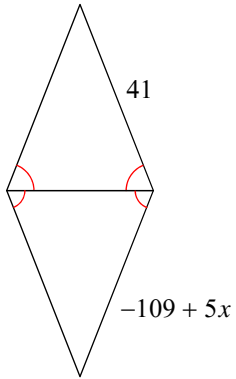


# Isosceles, Equilateral Triangles and Review

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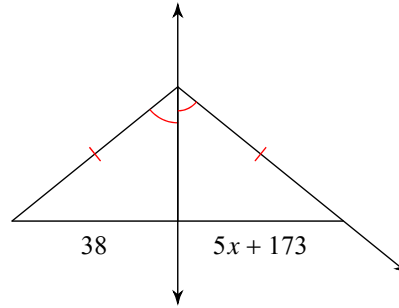
**Find the value of  $x$ .**

1)



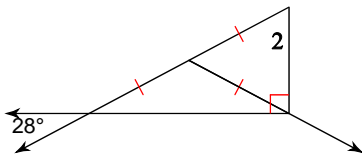
- A) 30
- B) -41
- C) -38
- D) -29

2)



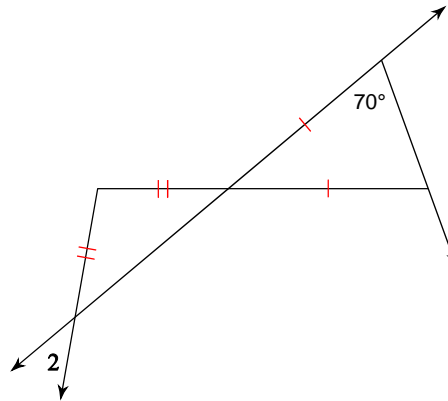
- A) -47
- B) -27
- C) 47
- D) -28

3)  $m\angle 2 = 9x - 1$



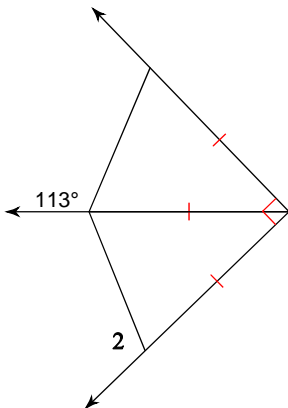
- A) 7
- B) 9
- C) -9
- D) 11

4)  $m\angle 2 = 3x + 7$



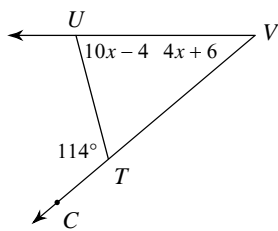
- A) 10
- B) 11
- C) -13
- D) 13

5)  $m\angle 2 = x + 121$

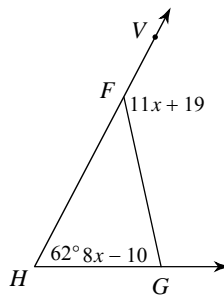


Find the measure of the angle indicated.

6) Find  $m\angle TUV$ .



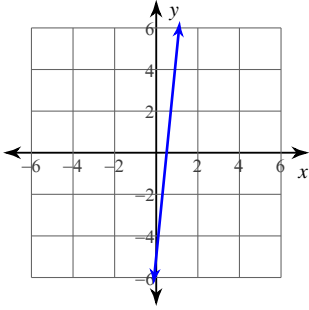
7) Find  $m\angle VFG$ .



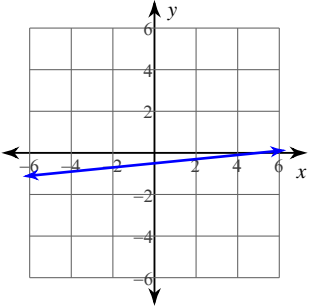
Sketch the graph of each line.

8)  $0 = 2x + 1 + \frac{1}{5}y$

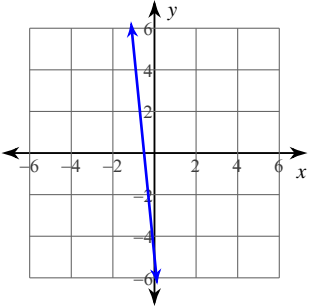
A)



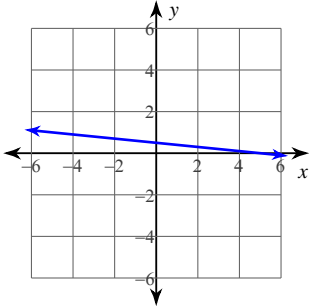
B)



C)

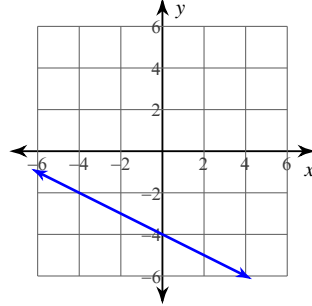


D)

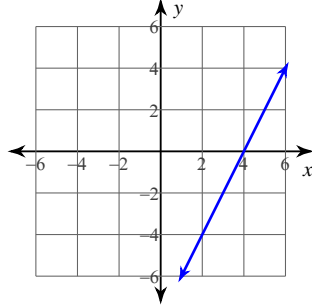


9)  $x - 2y = -8$

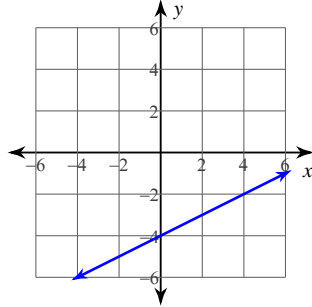
A)



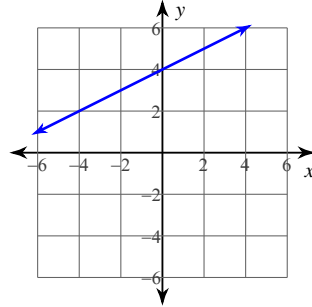
B)



C)

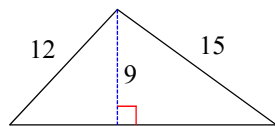


D)



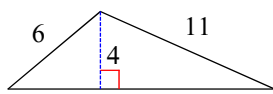
Find the area of each triangle. Round intermediate values to the nearest tenth. Use the rounded values to calculate the next value. Round your final answer to the nearest tenth.

10)



- A) 89.6      B) 65.9  
C) 122.1     D) 124.5

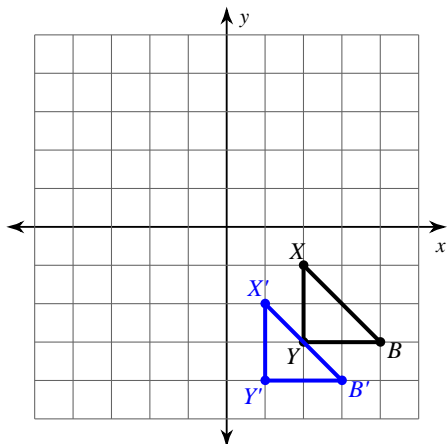
11)



- A) 28.1      B) 21.6  
C) 20.8      D) 29.4

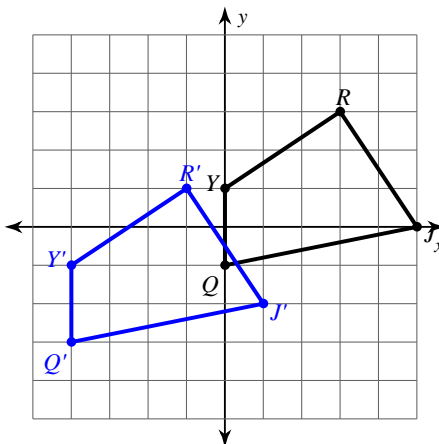
Write a rule to describe each transformation.

12)



- A) translation:  $(-1, -1)$   
B) rotation  $90^\circ$  clockwise about the origin  
C) translation:  $(-6, 4)$   
D) translation:  $(-1, 5)$

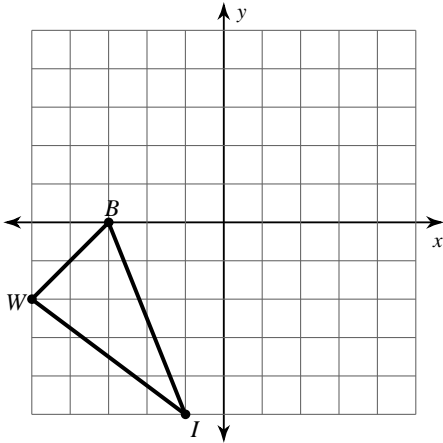
13)



- A) translation:  $(-3, -4)$   
B) rotation  $90^\circ$  counterclockwise about the origin  
C) reflection across  $y = -x$   
D) translation:  $(-4, -2)$

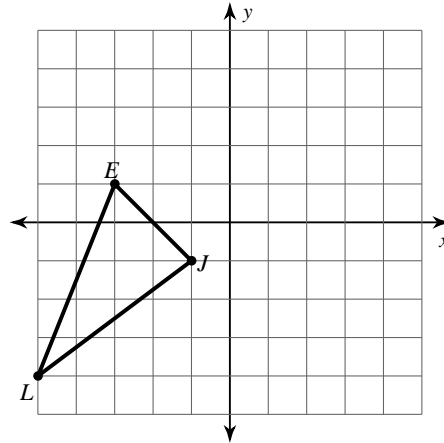
Find the coordinates of the vertices of each figure after the given transformation.

14) translation: 4 units right and 1 unit up



- A)  $W'(1, 0), B'(3, 2), I'(5, -3)$
- B)  $W'(-1, -1), B'(1, 1), I'(3, -4)$
- C)  $W'(5, 2), B'(3, 0), I'(1, 5)$
- D)  $B'(0, 3), I'(5, 1), W'(2, 5)$

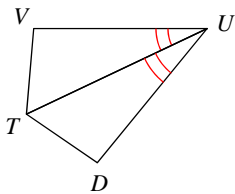
15) translation: 2 units right and 1 unit up



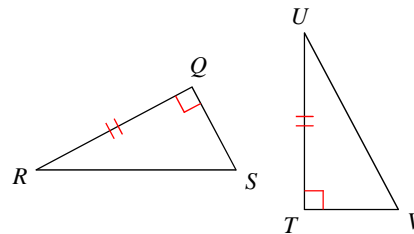
- A)  $L'(-3, -3), E'(-1, 2), J'(1, 0)$
- B)  $L'(4, -5), E'(-1, -3), J'(1, -1)$
- C)  $L'(-4, -5), E'(-2, 0), J'(0, -2)$
- D)  $L'(5, 4), E'(3, -1), J'(1, 1)$

State what additional information is required in order to know that the triangles are congruent for the reason given.

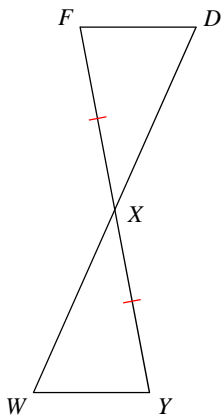
16) SAS



17) HL

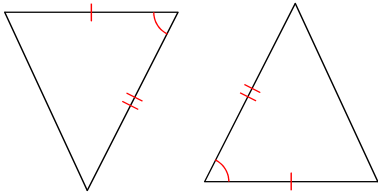


18) AAS

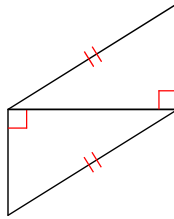


State if the two triangles are congruent. If they are, state how you know.

19)

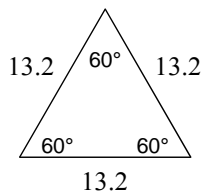


20)



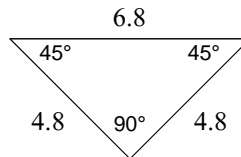
Classify each triangle by its angles and sides.

21)



- A) equilateral
- B) right obtuse
- C) right scalene
- D) acute scalene

22)



- A) obtuse equilateral
- B) scalene isosceles
- C) right isosceles
- D) acute isosceles

Find the distance between each pair of points. Round your answer to the nearest tenth, if necessary.

23) (8, 34), (9, 36)

24) (5, -8), (22, -46)

Find the midpoint of the line segment with the given endpoints.

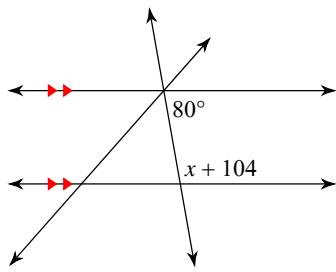
25) (3.5, -4.3), (2.5, -10.4)

Find the other endpoint of the line segment with the given endpoint and midpoint.

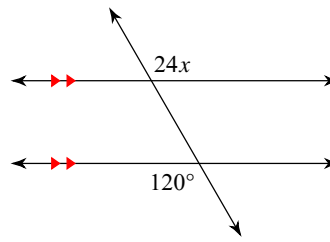
26) Endpoint:  $\left(-2\frac{1}{6}, -1\frac{1}{2}\right)$ , midpoint:  $\left(1\frac{3}{4}, 1\right)$

Solve for  $x$ .

27)



28)



## Answers to Isosceles, Equilateral Triangles and Review

- |   |                                    |                |   |
|---|------------------------------------|----------------|---|
| 1) A                                    | 2) B                               | 3) A           | 4) B                                    |
| 5) -9                                   | 6) $76^\circ$                      | 7) $140^\circ$ | 8) C                                    |
| 9) D                                    | 10) A                              | 11) D          | 12) $\overline{AV} \cong \overline{DU}$ |
| 13) $\overline{D}$                      | 14) B                              | 15) A          | 16) $\overline{VU} \cong \overline{DU}$ |
| 17) $\overline{RS} \cong \overline{UV}$ | 18) $\angle W \cong \angle D$      | 19) SAS        | 20) HL                                  |
| 21) A                                   | 22) C                              | 23) 2.2        | 24) 41.6                                |
| 25) $(3, -7.35)$                        | 26) $(5\frac{2}{3}, 3\frac{1}{2})$ | 27) -4         | 28) 5                                   |