

Semester 2 Faux Final

Solve each system by elimination.

$$\begin{aligned} 1) \quad & -x + 2y = -18 \\ & x + y = 0 \end{aligned}$$

$$\begin{aligned} 2) \quad & -10x - 3y = -3 \\ & 20x + 5y = 5 \end{aligned}$$

Solve each system.

$$\begin{aligned} 3) \quad & y = -\frac{1}{4}x + 6 \\ & y = 2x - 3 \end{aligned}$$

$$\begin{aligned} 4) \quad & 0 = x - 2y + 18 \\ & 24x = -24 - 3y \end{aligned}$$

Solve the system.

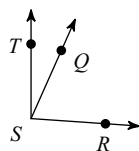
$$\begin{aligned} 5) \quad & x - y = 7 \\ & 5x + 2y = -21 \end{aligned}$$

$$\begin{aligned} 6) \quad & -4x - 3y = -8 \\ & -3x - 4y = 8 \end{aligned}$$

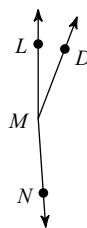
- 7) Jacob and Wilbur are selling pies for a school fundraiser. Customers can buy cherry pies and pumpkin pies. Jacob sold 8 cherry pies and 1 pumpkin pie for a total of \$84. Wilbur sold 11 cherry pies and 3 pumpkin pies for a total of \$148. What is the cost each of one cherry pie and one pumpkin pie?

- 8) The school that Shanice goes to is selling tickets to the annual talent show. On the first day of ticket sales the school sold 12 senior citizen tickets and 4 child tickets for a total of \$72. The school took in \$146 on the second day by selling 14 senior citizen tickets and 15 child tickets. What is the price each of one senior citizen ticket and one child ticket?

- 9) Find $m\angle QSR$ if $m\angle TSQ = 24^\circ$ and $m\angle TSR = 94^\circ$.

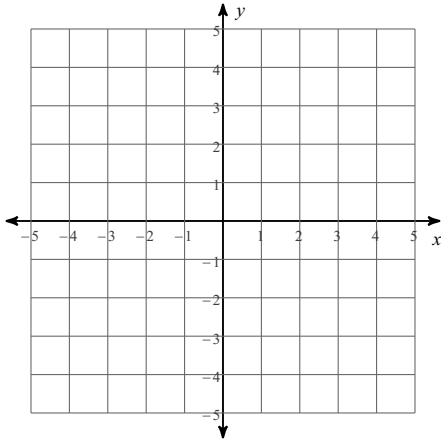


- 10) Find $m\angle DMN$ if $m\angle DMN = 13x - 1$, $m\angle LMD = 2x - 3$, and $m\angle LMN = 176^\circ$.

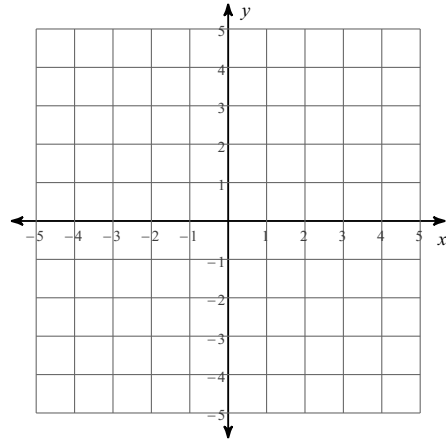


Sketch the solution to each system of inequalities.

11) $y \geq 2x - 3$
 $y \geq -3x + 2$

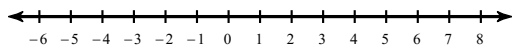


12) $y \leq x - 1$
 $y > x - 3$

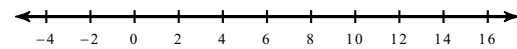


Solve each compound inequality and graph its solution.

13) $-9 < n - 5 \leq 1$

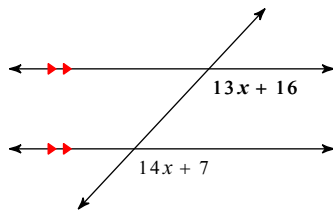


14) $11 - 3b \leq -22$ or $11b + 8 < -3$

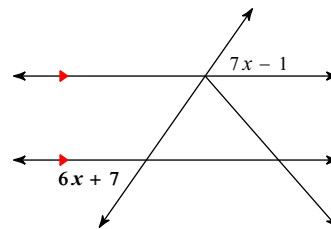


Find the measure of the angle indicated in bold.

15)

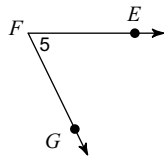


16)

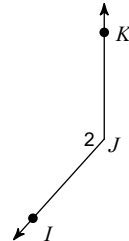


Name each angle in four ways.

17)

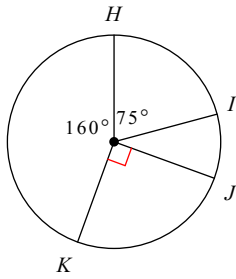


18)

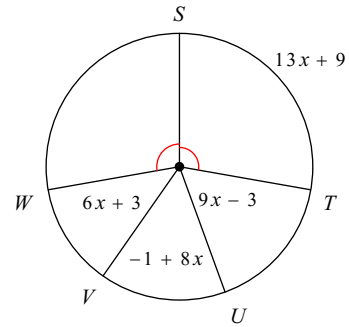


Find the measure of the arc or central angle indicated. Assume that lines which appear to be diameters are actual diameters.

19) $m\widehat{KHJ}$

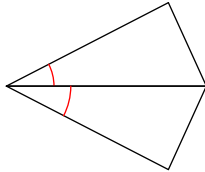


20) $m\widehat{UV}$

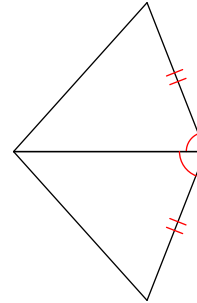


State if the two triangles are congruent. If they are, state how you know.

21)

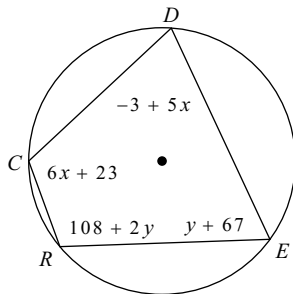


22)



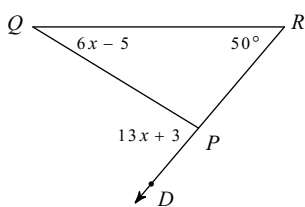
Solve for x and y .

23)

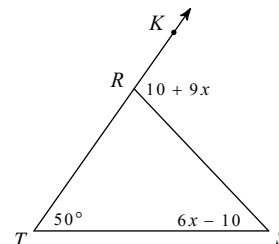


Solve for x .

24)



25)

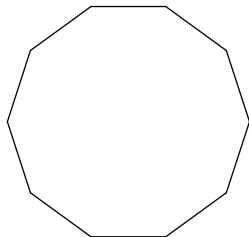


Points A, B, C, and D are collinear and positioned in that order. Find the length indicated.

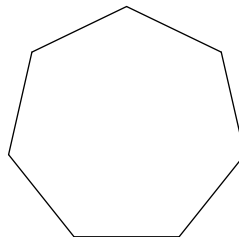
26) $CD = 3x + 226$, $AB = 4x + 214$, $AD = 165$,
and $BC = 5x + 265$. Find BC .

Find the measure of one interior angle in each polygon. Round your answer to the nearest tenth if necessary.

27)



28)



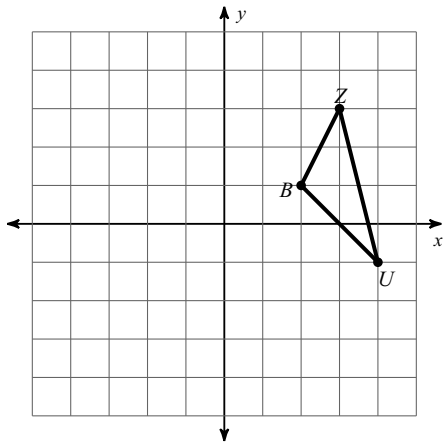
Find the interior angle sum for each polygon. Round your answer to the nearest tenth if necessary.

29) regular hexagon

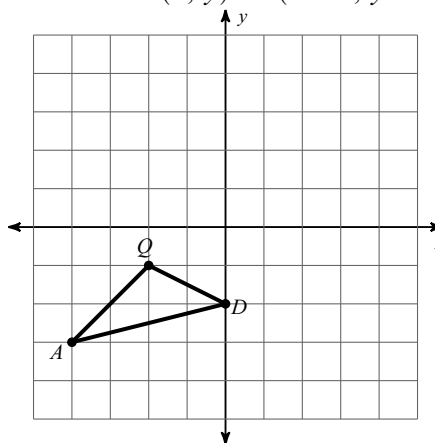
30) regular 14-gon

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

31) rotation 90° clockwise about the origin

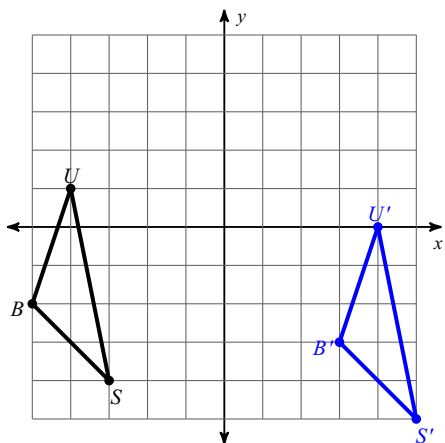


32) translation: $(x, y) \rightarrow (x + 3, y + 2)$

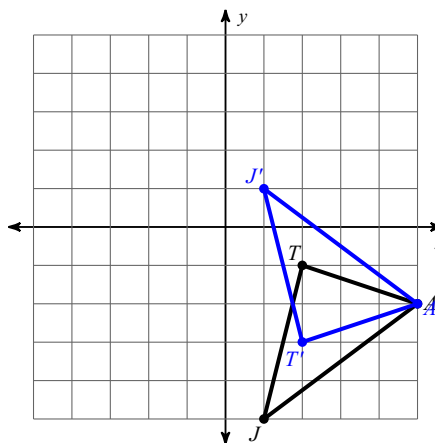


Write a rule to describe each transformation.

33)

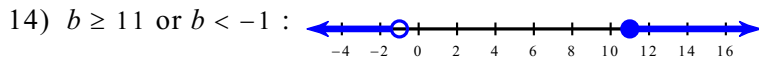
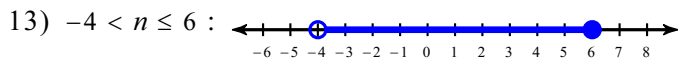
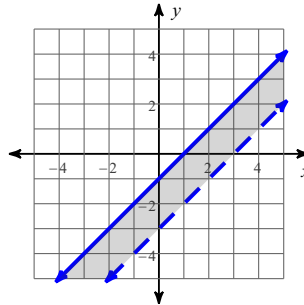
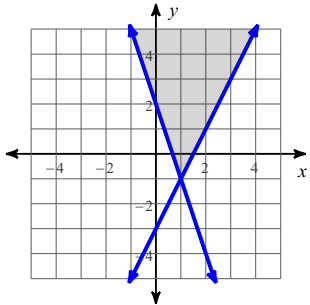


34)



Answers to Semester 2 Faux Final

- 1) $(6, -6)$ 2) $(0, 1)$ 3) $(4, 5)$ 4) $(-2, 8)$
 5) $(-1, -8)$ 6) $(8, -8)$ 7) cherry pie: \$8, pumpkin pie: \$20
 8) senior citizen ticket: \$4, child ticket: \$6 9) 70° 10) 155°
 11) 12)



- 15) 133° 16) 55° 17) $\angle F, \angle 5, \angle EFG, \angle GFE$
 18) $\angle J, \angle 2, \angle IJK, \angle KJI$ 19) 270° 20) 55° 21) Not congruent
 22) SAS 23) $x = 15, y = 0$ 24) 6 25) 10
 26) 40 27) 144° 28) 128.6° 29) 720°
 30) 2160° 31) $B'(1, -2), Z'(3, -3), U'(-1, -4)$
 32) $A'(-1, -1), Q'(1, 1), D'(3, 0)$ 33) translation: $(x, y) \rightarrow (x + 8, y - 1)$
 34) reflection across $y = -2$