Unit 10: Trigonometry & analytic geometry Name:
11 March 2020

**10.3 Do Now: Linear equations, review**

1. Write down the slope perpendicular to the given slope.

   (a) $m = -\frac{3}{5}$ $m_\perp =$

   (b) $m = -2$ $m_\perp =$

   (c) $m = 0.75$ $m_\perp =$

   (d) $m = \frac{1}{2}$ $m_\perp =$

2. Write down the center and radius of each circle.

   (a) $(x+4)^2 + (y-3)^2 = 81$

   (b) $x^2 + (y+1)^2 = 20$

   (c) $x^2 + 8x + y^2 - 6y = -16$

   (d) $x^2 - 10x + y^2 - 16y = -40$

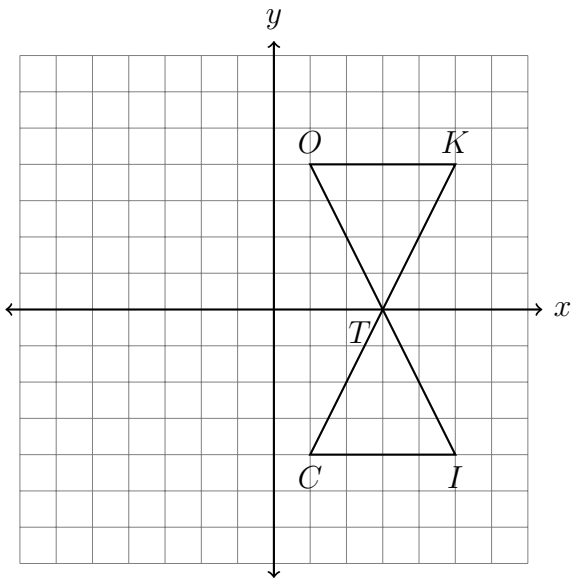
   In the following problems, use the point-slope formula: $y - y_1 = m(x - x_1)$

3. What is the equation of a line through $(-1, -4)$ parallel to the line $y = \frac{3}{2}x + 1$?

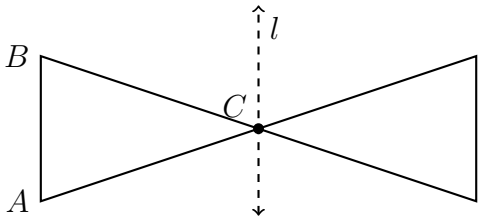
4. What is the equation of a line through $(3, -5)$ perpendicular to the line $x - 2y = 6$?

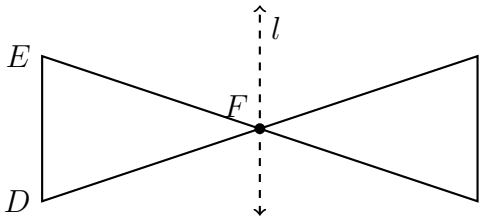
5. *Spicy* What is an equation of the perpendicular bisector of $\overline{AB}$ with $A(-2, 5)$ and $B(4, -1)$?

6. Describe a rigid motion that maps $\triangle TIC$ onto $\triangle TOK$.




7. Mark the missing labels for a reflection across $l$ of $\triangle ABC$ onto $\triangle A'B'C'$, and for a rotation of 180° counterclockwise around $C$ of $\triangle DEF$ onto $\triangle D'E'F'$.




8. Find the coordinates of the image of the point $G(6, 1)$ after a rotation of 90° around the origin.