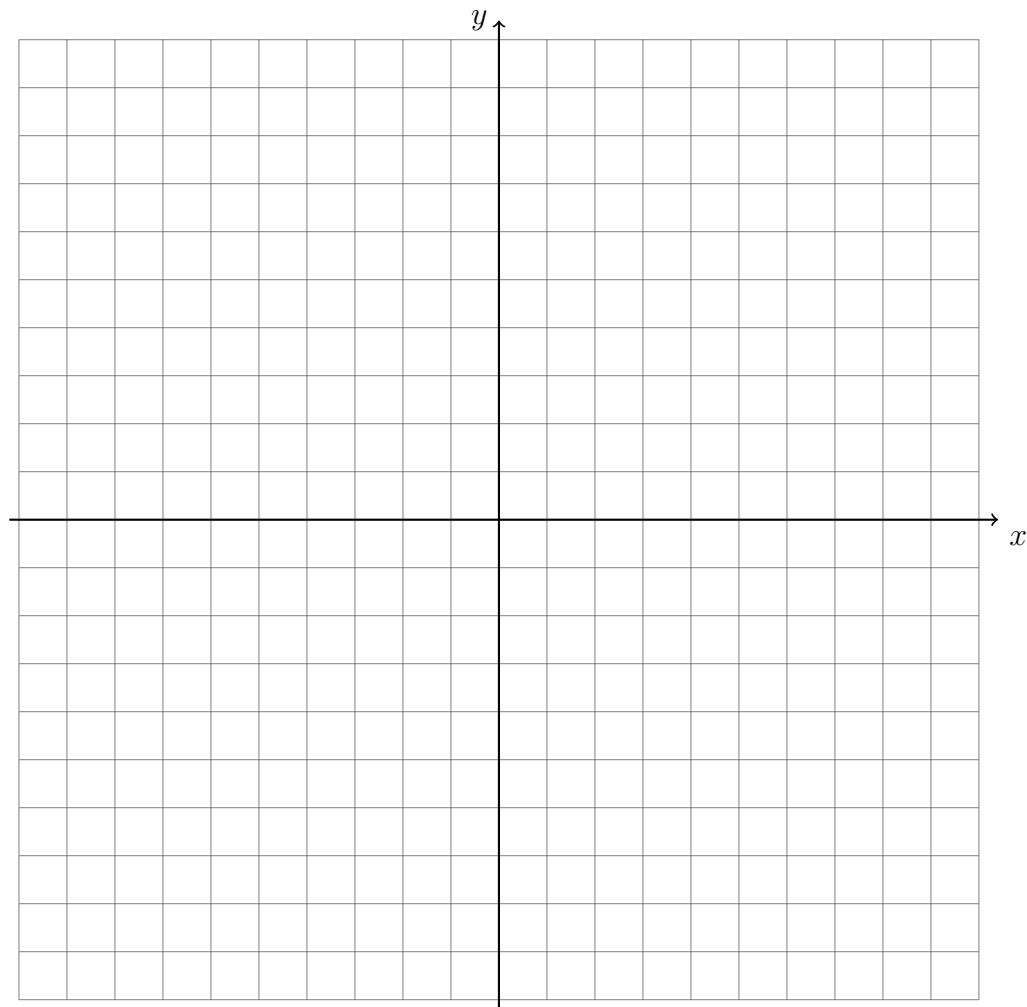Name:

9.8 Pretest **Linear & quadratic functions on the coordinate plane**

1. Graph and label the two equations. Mark their intersection as an ordered pair.

$$y = \frac{2}{3}x - 5 \qquad\qquad\qquad 3x + 2y = 16$$

Are the lines parallel, perpendicular, or neither? Justify your answer.

2. Find the decimal value of each expression, rounded to the nearest hundredth.

(a) $5\sqrt{7}$

(c) $4 - \sqrt{7}$

(b) $\dfrac{4^2}{17}$
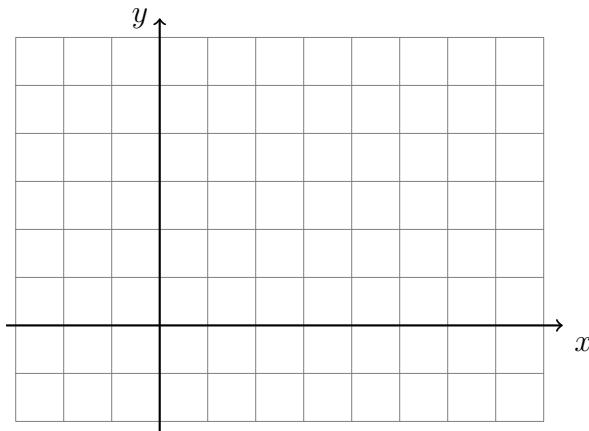
(d) 7π

4. The line l has the equation $y = \frac{1}{4}x - 11$.

   (a) What is the slope of the line k, given $k \parallel l$?

   (b) What is the slope of the line m, given $m \perp l$?

5. On the graph below, draw $\overline{AB}$, with $A(-2,3)$ and $B(5,1)$, labeling the end points. Determine and state the coordinates of the midpoint M of $\overline{AB}$ and mark and label it on the graph.

6. Given $M(2,6)$ and $N(-3,-6)$, find the length of $\overline{MN}$.

7. A translation maps $A(3,11) \to A'(-2,3)$. What is the image of $B(0,7)$ under the same translation?