BECA / Dr. Huson / Geometry 06-Analytic-geometry Name:
pset ID: 72

6-10DN-reQ-Distance+slope

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

   (a) $m = \frac{4}{3}$ $m_\perp =$

   (b) $m = -3$ $m_\perp =$

   (c) $m = -0.5$ $m_\perp =$

   (d) $m = \frac{4}{7}$ $m_\perp =$

2. The line l has the equation $y = -\frac{1}{3}x + 4$.

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

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

3. What is the slope of a line parallel to the line $x - 3y = 9$?

4. What is the slope of a line perpendicular to the line $-2x + 4y = 12$?

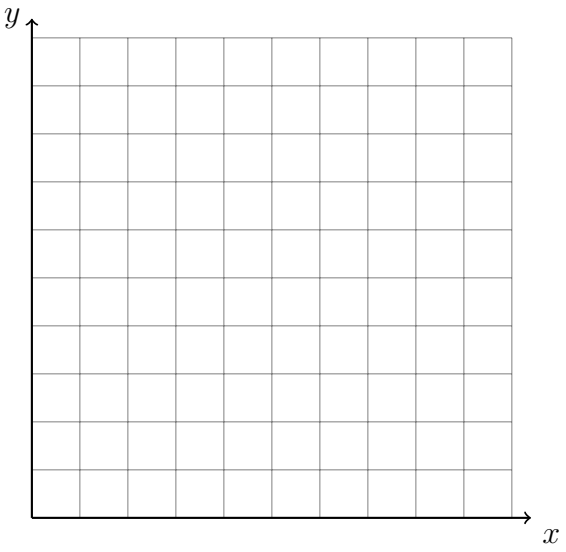
Note: The formula for distance is $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

5. Graph and label $\triangle ABC$ and find the lengths of its sides. $A(2, 1)$, $B(8, 9)$, $C(8, 1)$.

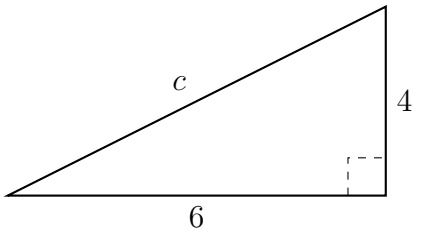
   (a) $AC =$

   (b) $BC =$

   (c) $AB =$



6. Find c.



7. What is the length of $\overline{CD}$ if $C(2, 1)$ and $D(-3, -11)$?

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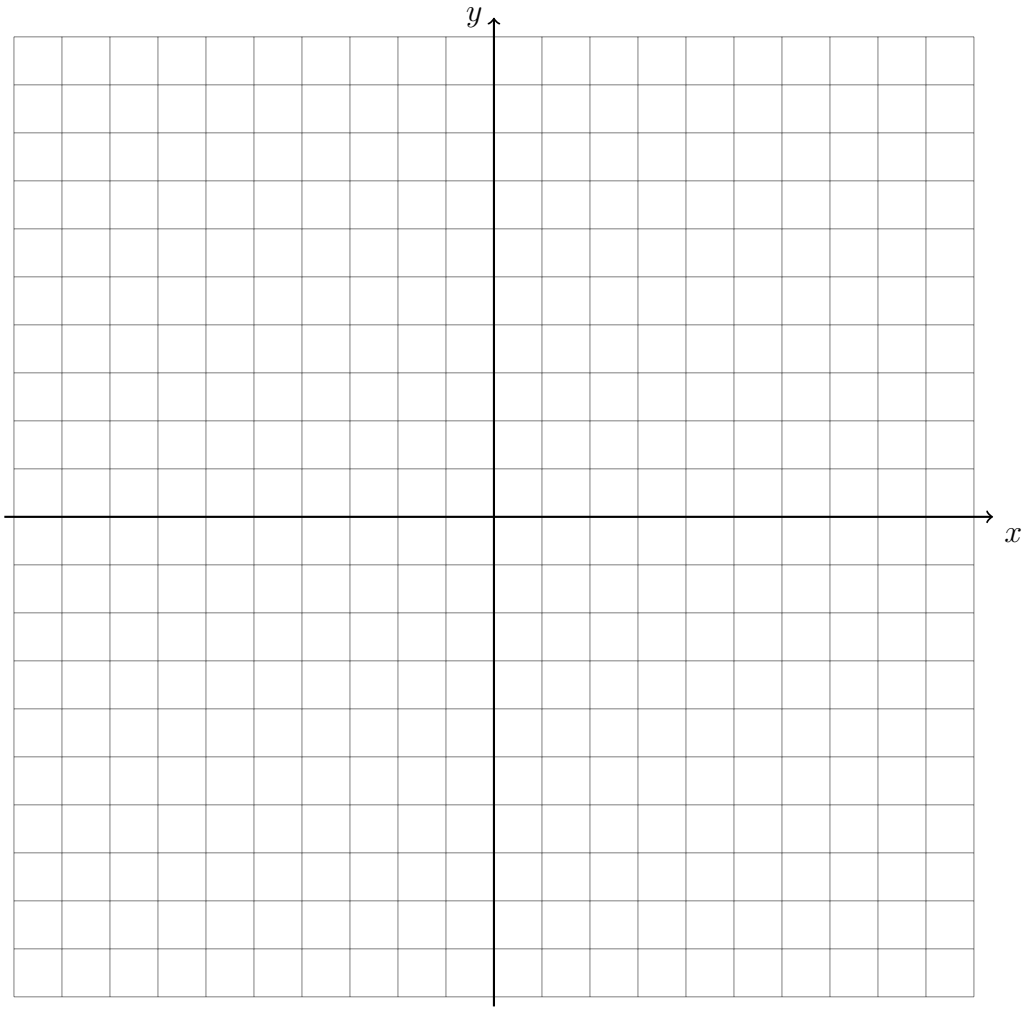
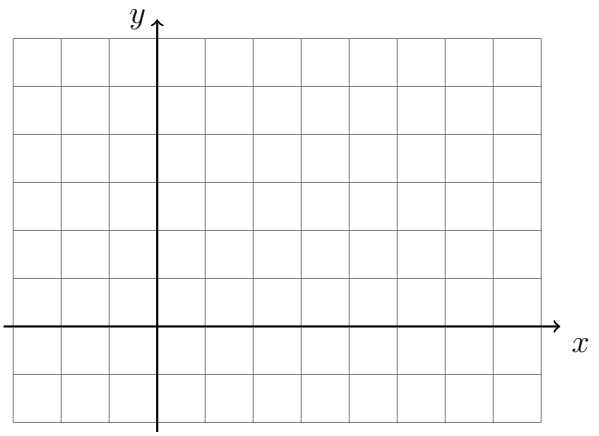
8. Graph and label the two equations. Mark their intersection as an ordered pair.

$y = x + 7$ $4x + 5y = -10$

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



9. 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.



10. Spicy: On the set of axes below, graph the quadrilateral $ABCD$ having coordinates $A(-3, -3)$, $B(5, 1)$, $C(6, 8)$, and $D(-2, 4)$. Find the slope of each of the four sides. What type of quadrilateral is $ABCD$? Justify your answer.