

<p>Two lines are parallel if and only if they have the same slope.</p>	<p>Line a and line b are parallel. If $m_a = \frac{-3}{2}$ then $m_b = \underline{\hspace{2cm}}$</p>	
<p>Two lines are perpendicular if and only if they have opposite, reciprocal slopes.</p>	<p>Line a and line c are perpendicular. If $m_a = \frac{-3}{2}$ then $m_c = \underline{\hspace{2cm}}$</p>	

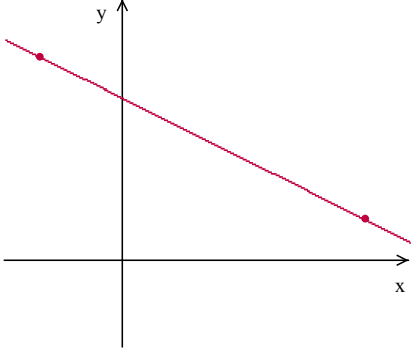
<p>1. The equation of line is $p: y = \frac{1}{5}x - 3$</p> <p>a) What is the slope of line p. $m_p =$</p> <p>b) If line n is parallel to line p then $m_n =$</p> <p>c) If line r is perpendicular to line p then $m_r =$</p>	<p>2. Two points on line t are $(3,5)$ and $(5,12)$</p> <p>a) Find the slope of line t. $m_t =$</p> <p>b) If line w is parallel to line t then $m_w =$</p> <p>c) If line v is perpendicular to line t then $m_v =$</p>
<p>3. The equation of line is $p: 3x + 4y = 12$</p> <p>a) Find the slope of line p.</p> <p>b) If line n is parallel to line p then $m_n =$</p> <p>c) If line r is perpendicular to line p then $m_r =$</p>	<p>4. Two points on line t are $(-2,7)$ and $(7,1)$</p> <p>a) Find the slope of line t.</p> <p>b) If line w is parallel to line t then $m_w =$</p> <p>c) If line v is perpendicular to line t then $m_v =$</p>

Graph each pair of lines. Add markings to the lines to show that they are parallel or perpendicular.

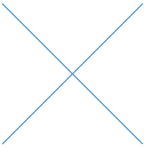
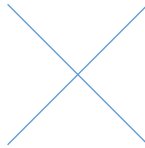
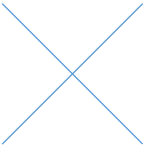
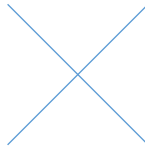
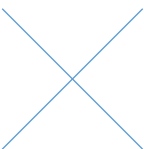
<p>5.</p> $y = \frac{1}{4}x - 2$ $y = -4x + 1$	<p>6.</p> $y = 2x - 5$ $y = 2x + 3$
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Determine if each pair of lines are parallel or perpendicular.

<p>7. $y = \frac{1}{4}x - 2$ $y = -4x + 1$</p>	<p>8. $y = 2x + 3$ $y = 2x + 6$</p>	<p>9. $y = 3x + 7$ $2x + 6y = 12$</p>
<p>10. $y + 2 = \frac{5}{3}(x + 1)$ $y = \frac{-3}{5}x$</p>	<p>11. $y = 3$ $y = -2$</p>	<p>12. $x = 2$ $y = 4$</p>

<p>13. Find the equation of the line passes through $(-2, 5)$ and $(6, 1)$. Show work algebraically.</p> <p>Formulas: $m = \frac{y_2 - y_1}{x_2 - x_1}$ $y - y_1 = m(x - x_1)$</p>	<p>Use the graph to make sure your answer is reasonable.</p> 
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Factoring Practice:

<p>14. $3x^2 - 14x + 15$</p> <p>____ ____ ____ ____</p> <p>____() ____ ()</p> <p>() ()</p> 	<p>15. $3x^2 + 10x - 8$</p> <p>____ ____ ____ ____</p> <p>____() ____ ()</p> <p>() ()</p> 
<p>16. $2a^2 - a - 10$</p> 	<p>17. $2x^2 + x - 15$</p> 
<p>18. $8p^2 + 2p - 3$</p> 	<p>19. $9x^2 + 9x - 4$</p> 