

4.3 wkst #1

1. **Fill in the blank:** Parallel lines have _____ slopes. Perpendicular lines have _____ slopes.

Determine if the lines are parallel. Explain.

<p>2. Line a passes through $(-1, 4)$ and $(1, 5)$. Line b passes through $(0, 4)$ and $(2, 5)$.</p> <p>Line a: Line b: m= m=</p> <p>Parallel? <u>Circle</u> Yes or No Explain:</p>	<p>3. Line a passes through $(0, 4)$ and $(-6, 8)$. Line b passes through $(-9, -5)$ and $(3, 3)$.</p> <p>Line a: Line b: m= m=</p> <p>Parallel? <u>Circle</u> Yes or No Explain:</p>
<p>4. Line a: $y = 4x - 7$ Line b: $12x + 3y = 6$ Line a: Line b:</p> <p>m= m=</p> <p>Parallel? <u>Circle</u> Yes or No Explain:</p>	<p>5. Line a: $2y = x + 12$ Line b: $2y - x = 5$ Line a: Line b:</p> <p>m= m=</p> <p>Parallel? <u>Circle</u> Yes or No Explain:</p>

Determine if the lines are perpendicular. Explain.

<p>6. Line a passes through $(-2, 3)$ and $(2, 5)$. Line b passes through $(0, 0)$ and $(-5, -10)$.</p> <p>Line a: Line b: m= m=</p> <p>Perpendicular? <u>Circle</u> Yes or No Explain:</p>	<p>7. Line a passes through $(4, 2)$ and $(8, 3)$. Line b passes through $(2, -6)$ and $(-3, 14)$.</p> <p>Line a: Line b: m= m=</p> <p>Perpendicular? <u>Circle</u> Yes or No Explain:</p>
<p>8. Line a: $y = -3x + 7$ Line b: $-3y + x = 18$ Line a: Line b:</p> <p>m= m=</p> <p>Perpendicular? <u>Circle</u> Yes or No Explain:</p>	<p>9. Line a: $2x + 3y = 12$ Line b: $-3y = 3x + 12$ Line a: Line b:</p> <p>m= m=</p> <p>Perpendicular? <u>Circle</u> Yes or No Explain:</p>

Write an equation of the line that passes through the given point and is parallel to the given line.

<p>10. </p>	<p>11. $(-3, 1); y = -5x + 2$</p>
<p>11. $(2, -3); y = \frac{1}{2}x - 7$</p>	<p>12. $(0, 4); y = -\frac{3}{5}x + 10$</p>

Write an equation of the line that passes through the given point and is perpendicular to the given line.

<p>13. </p>	<p>14. $(-6, 0); y = -3x + 11$</p>
<p>15. $(4, -2); y = -4x + 6$</p>	<p>16. $(-1, 0); x + 3y = 6$</p>