

Algebra 1 Bellwork Monday, January 25, 2016

1. Is each pair of lines Parallel, Perpendicular, or Neither?

1. $y = 2x - 9$
 $y = 2$

2. $y = -5x + 3$
 $y = -\frac{1}{5}x + 1$

3. $y = -3x - 9$
 $12x + 4y = 10$

4. $y = 0.25x + 3$
 $8x + 2y = 6$

5. $y = -4x + 5$
 $16x + 4y = 20$

6. Write an equation for the line that is parallel to the line $y = 7x - 9$ and passes through the point $(-1, 6)$.

7. Write an equation for the line that is perpendicular to the line $6x + 2y = 10$ and passes through the point $(4, -8)$.

Algebra 1 Bellwork Monday, January 25, 2016

ANSWERS

1. Is each pair of lines Parallel, Perpendicular, or Neither?

1. $y = 2x - 9$ $m = 2$
 $y = 2$ $m = 0$

Neither

2. $y = -5x + 3$ $m = -5$
 $y = -\frac{1}{5}x + 1$ $m = -\frac{1}{5}$

NEITHER

3. $y = -3x - 9$ $m = -3$ $b = -9$
 $12x + 4y = 10 \rightarrow y = \frac{10 - 12x}{4} = 2.5 - 3x$
 $m = -3$ $b = 2.5$

Parallel

4. $y = 0.25x + 3$ $m = .25 = \frac{1}{4}$
 $8x + 2y = 6$

$y = \frac{6 - 8x}{2}$

$y = 3 - 4x$ $m = -4$

⊥

5. $y = -4x + 5$
 $16x + 4y = 20$

$y = \frac{20 - 16x}{4} = 5 - 4x$

Neither

they are the same line

6. Write an equation for the line that is parallel to the line $y = 7x - 9$ and passes through the point $(-1, 6)$.

$y - 6 = 7(x + 1)$
or
 $y = 7x + 13$

slope = 7
parallel line slope = 7

7. Write an equation for the line that is perpendicular to the line $6x + 2y = 10$ and passes through the point $(4, -8)$.

$y + 8 = \frac{1}{3}(x - 4)$

$y = \frac{10 - 6x}{2}$ slope = -3
 $y = 5 - 3x$ ⊥ slope 1
 $= \frac{1}{3}$