Name: _____

CC Algebra Homework

Parallel and Perpendicular Lines

1) Which line is parallel to a line having the equation $y = 3x + 1$?

A) $3y = x + \frac{1}{3}$ C) $y = x + 3$

B) $y = -3x + 1$ D) $y = 3x - 4$

2) A line has a slope of -7. What is the slope of any line perpendicular to this line?

A) $-\frac{1}{7}$ C) $\frac{1}{7}$

B) -7 D) 7

3) What is the slope of the line perpendicular to the line joining (8,1) and (24,9)?

A) 2 C) $\frac{1}{2}$

B) -2 D) $-\frac{1}{2}$

4) Which line is parallel to a line having the equation $3y = 6x - 9$?

A) $y = 6x - 9$ C) $y = 3x + 3$

B) $y = 2x + 4$ D) $y = 6x - 2$

5) What is the slope of the line that is perpendicular to the line $y + 2 = 4(x + 3)$?

6) Write an equation of the line which is parallel to $y = 3x - 5$ and passes through the point (1,8).

7) Write an equation of the line which is parallel to $y = \frac{1}{2}x + 4$ and passes through the point (6,-4).

8) Write an equation of the line perpendicular to the line $y = 4x - 9$ and passing through the point (3,2).

9) What is an equation of a line that passes through the point (-2,1) and is perpendicular to the line whose equation is $2x - 5y = 10$?

10) Write an equation of the line which is parallel to $3x + 5y = 7$ and passes through the point (10,-3).

1) D 2) C 3) B 4) B

5) $-\frac{1}{4}$

6) $y = 3x + 5$

7) $y = \frac{1}{2}x - 7$

8) SAMPLE ANSWER: $y - 2 = -\frac{1}{4}(x - 3)$

9) SAMPLE ANSWER: $y = -\frac{5}{2}x - 4$

10) $y = -\frac{3}{5}x + 3$