Section 2.3: Equation of a line

#1- 6: Use the slope intercept formula to find the slope-intercept form of an equation of a line with $slope\ m$, passing through the $point\ (x, y)$. Write your answer in $slope - intercept$ form.

1) $m = -3\ \ point\ (-2,4)$

2) $m = -5\ \ point\ (4,7)$

3) $m = 9\ \ point\ \ (-3, -4)$

4) $m = 11\ \ \ point\ (-2, -5)$

5) $m = \frac{3}{4}\ \ point\ (5,4)$

6) $m = \frac{2}{3}\ \ point\ \ (1,5)$

#7-12: Use the point slope formula to find the equation of a line with slope m, passing through the point (x, y). Write your answer in slope-intercept form.

7) $m = 2\ \ point\ (-1, -4)$

8) $m = 8\ \ point\ (-2, -9)$

9) $m = -3\ \ point\ \ (8,2)$

10) $m = -6\ \ \ point\ (3, 1)$

11) $m = \frac{-3}{4}\ \ point\ (9,1)$

12) $m = \frac{-2}{3}\ \ point\ \ (8,3)$

#13-16: Use the point slope formula to find the equation of a line passing through the points$(x_1, y_1)\ and\ (x_2, y_2)$. Write your answer in slope-intercept form.

13) $(5,6) and\ (4,7)$

14) $(3,5) and\ (6,2)$

15) $(1,14) and\ (4,10)$

16) $(3,9)\ and\ (7,6)$

#17-20: Find the slope-intercept form of the equation of a line passing through the point $(x, y)$ that is parallel to the given line.

17) $point\ (3, -6)\ parallel\ to\ y = 5x - 4$

18) $point\ (2, -5)\ parallel\ to\ y = 9x + 8$

19) $point\ (8, -3)\ parallel\ to\ y = \frac{3}{4}x + 1$

20) $point\ (10, -6)\ parallel\ to\ y = \frac{3}{5}x - 4$

#21-24: Find the slope-intercept form of the equation of a line passing through the point $(x, y)$ that is perpendicular to the given line.

21) $point\ (5,7)\ perpendicular\ to\ y = \frac{-1}{3}x + 3$

22) $point\ (5,-2)\ perpendicular\ to\ y = \frac{-1}{4}x - 5$

23) $point\ (-8,-1)\ perpendicular\ to\ y = \frac{2}{5}x + 1$

24) $point\ (-4,3)\ perpendicular\ to\ y = \frac{5}{2}x + 1$

#25-28: Find the equation of the vertical line passing through the point (x, y).

25) $point\ (2,3)$ 26) $point\ (5,6)$ 27) $point\ (-2,-1)$ 28) $point\ (-4,-6)$

#29-32: Find the equation of the horizontal line passing through the point (x ,y).

29) $point\ (7,5)$ 30) $point\ (5,2)$ 31) $point\ (2,-3)$ 32) $point\ (2,-1)$