Math 93 Section 3.7
Worksheet

Name____________________________

Review

Graph the linear equation.

1) \(-5x - 15y = 5\)  

Find the slope-intercept equation for the line with the indicated slope and y-intercept.

2) Slope \(-\frac{7}{5}\); y-intercept \((0, 9)\)

Graph the specified line.

3) The line with slope \(\frac{1}{6}\) that passes through the point \((0, 6)\)

4) The line with slope \(\frac{4}{3}\) that passes through the point \((4, 1)\)
Write the equation of the line on the graph in slope-intercept form.

5) ___________

Now Some New Stuff

Graph the line.

6) \( y - 2 = -\frac{1}{2}(x - 4) \)

Graph the line.

7) \( y + 1 = 4(x + 4) \)

Find an equation in point-slope form of the line having the specified slope and containing the point indicated.

8) \( m = 6; \ (4, 3) \)

9) \( m = -\frac{3}{4}; \ (-2, -3) \)
Find an equation of the line having the specified slope and containing the indicated point. Write your answer in slope-intercept form.

10) $m = -3; \; (3, -3)$

11) $m = 4; \; (-7, 0)$

12) $m = 4; \; (0, -5)$

Find an equation of the line containing the given pair of points. Write your final answer in slope-intercept form.

13) $(7, 5)$ and $(0, 3)$

14) $(7, -6)$ and $(3, -1)$

15) $(3, -1)$ and $(-4, -1)$

Write an equation of the line containing the specified point and parallel or perpendicular, as indicated, to the given line. Write your final answer in slope-intercept form.

16) $(0, 7), \text{ parallel to } -3x + y = 1$

17) $(7, 2), \text{ perpendicular to } 7x + 2y = 45$
Solve the problem.

18) A gas station sells 4820 gallons of regular unleaded gasoline on a day when they charge $1.35 per gallon, whereas they sell 3932 gallons on a day that they charge $1.40 per gallon. Find a linear function that expresses gallons sold as a function of price.

19) Persons taking a 30-hour review course to prepare for a standardized exam average a score of 620 on that exam. Persons taking a 70-hour review course average a score of 796. Find a linear function, S(t), which fits this data, and which expresses score as a function of time. Use this function to predict an average score for persons taking a 56-hour review course. Round your answer to the tenths place.

20) In 1820 the population of a midwest city was 20,000. By 1860 it had grown to 23,000. If it continues to grow at the same rate, what will the population be in 1883? Give your answer to the nearest whole number.