Graph the following linear equations.

1. y = $\frac{-3}{4}x+6$
2. y = 3x – 5



Write the following linear equations with the given information. Write them in slop-intercept form (y = mx + b).

|  |  |
| --- | --- |
| x | y |
| -2 | 5 |
| -1 | 3 |
| 0 | 1 |
| 1 | -1 |

|  |  |
| --- | --- |
| x | y |
| 2 | 12 |
| 4 | 13 |
| 6 | 14 |
| 8 | 15 |

1. The Body Mass Index (BMI) is a measure of body fat using height and weight. The heights and weights of twelve men with normal BMI are given in the table.

|  |  |
| --- | --- |
| Height (in.) | Weight (lb.) |
| 62 | 115 |
| 63 | 124 |
| 65 | 120 |
| 67 | 134 |
| 67 | 140 |
| 68 | 138 |
| 68 | 144 |
| 68 | 152 |
| 69 | 147 |
| 72 | 155 |
| 73 | 168 |
| 73 | 166 |

1. Make a scatter plot comparing the height in inches to the weight in pounds.
2. Draw a line of best fit for the data and find the equation of the line in slope-intercept form (y = mx + b).
3. Use your graphing calculator and linear regression to find the line of best fit.
4. Use both equations to predict what the height of a man will be that is 188 pounds.
5. Use both equations to predict the normal weight for a man who is 84 inches tall.
6. Interpret r. Which equation should you use to make predictions?

Review. Follow the directions.

1. Find the mean, median and mode of the following data and determine which is the best measure of central tendency.

2, 3, 4, 2, 3, 5, 7, 8 , 1, 5, 2, 3, 4, 6, 7, 1, 1, 3, 4, 5, 2, 6, 7, 8, 9, 11, 1, 12, 14, 15

1. Solve the systems of equations. Kelsey and Emma babysit after school to earn extra money. Kelsey made $52 by charging $10 per hour and $4 per child. Emma made $67.50 by charging $15 per hour and $2.50 per child. How many hours and how many children did each babysit? (Define variables, write equations, and then solve.)

1. Solve the following quadratic equation. 3x2 + 10x = 15.