Find the equations of the lines given the following information:
5. Passing through the points (2, 5) and (4, -2).
6. Having a slope of \(\frac{7}{2}\) and passing through (2, 3).
7. Having a slope of 5 and passing through (0, -4).

\[7x + 2y = 24\]  
\[7x - 2y = 8\]  
\[5x - y = 4\]

8. Solve for \(x\): \(2(3x - 5) = 3x + 5\)

\[x = 5\]

9. Solve the system of equations:
\[
\begin{align*}
2x + 3y &= 5 \\
x + y &= 3
\end{align*}
\]

\[(4, -1)\]

10. Karen is driving a delivery truck on a straight road. The graph represents how many miles “y” Karen is from the Dollar Store after “x” hours.

a) As time goes by, is Karen getting closer to the store or farther away from the store? **closer**

b) How many miles per hour is Karen traveling? **25 mph**

c) Find the equation of the line. \(y = -25x + 300\)

d) How many hours has she been driving when she’s 200 miles from the Dollar Store? **4 hours**

e) How far is she from the Dollar Store after she’s been driving eight hours? **100 miles**
Write the following in slope-intercept form:
11. $4x + 5y = 20$  
12. $3y = 7x - 9$  
13. $x - 8y = 16$  
14. $12x = 4y - 8$

$y = -\frac{4}{5}x + 4$  
$y = \frac{7}{3}x - 3$  
$y = \frac{1}{8}x - 2$  
$y = 3x + 2$

15. You are in charge of your neighborhood Labor Day party. You call the local barbeque caterer who informs you that the standard party package is $6.95 per person plus a $15 delivery fee.

a) How much will it cost to cater the party for 52 people?  
b) What is the slope of this equation?  
$\$376.40$  
$\$6.95$ per person

c) Find the equation of this line.  
d) How many people can attend for a cost of $585?  
$y = 6.95x + 15$  
82 people

16. Suppose the sales of a company are given by the linear equation $y = 1500x + 6000$, where $x$ is the number of years after 1980 and $y$ is the sales in dollars.

a) What was the sales amount for 1980?  
b) What $x$ value represents the year 2005?  
$\$6000$  
$x = 25$

c) What is the average rate of change in sales per year?  
d) In what year were the sales $22,500?  
$\$1500$ per year  
1991

17. Graph the following system of equations to see where the lines cross.  
$y = 3x - 7$  
$y = 4x - 10$

(3, 2)

18. A test is given having 14 questions on it. Some problems are worth 6 points, the rest are worth 7 points, and the whole test is worth 92 points. How many of each problem should there be on the test?  
8 problems worth 7 points;  
6 problems worth 6 points