Algebra and Geometry Review 7

1. Solve for n.

$$\frac{4}{x} = \frac{x-8}{5}$$

2. If one leg of a right triangle has a length of 12 and the hypotenuse has a length of 18, how long is the other leg? (Write your answer in terms of a simplified radical.)

3. Solve the equation for y.

$2y + 7x = 12$

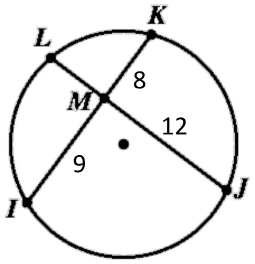
4. If $\tan\theta = \frac{3}{4}$, what is $\sin\theta$?

5. The variables m and n are inversely proportional. When m = 12, n = 7. If m = 4, what is n?

6. If the midpoint of a segment is (2, -1) and one endpoint has the coordinates (7, 4), what are the coordinates of the other endpoint?

7. You have the number 10 through 99 inclusive written on slips of paper in a bag. What is the probability that you will pull out a number that is a multiple of 5?

8. Find the length of $\overline{LM}$.



9. Solve by factoring.

$2x^2 - x - 6 = 0$

10. Given that $\overline{BD} \parallel \overline{AE}$, find the length of $\overline{BD}$.