Lab 12: February 20 (make up)

Name_____

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Find the product and simplify.

1) $\frac{7}{x+7} \cdot \frac{x}{6}$ 1) _____

2) $\frac{6y}{12y+6} \cdot \frac{14y+7}{3}$ 2) _____

3) $\frac{x^2+12x+35}{x^2+13x+40} \cdot \frac{x^2+15x+56}{x^2+14x+49}$ 3) _____

Find the quotient and simplify.

4) $\frac{4x^2}{5} \div \frac{x^3}{25}$ 4) _____

5) $\frac{(x-6)(x-5)}{2x} \div \frac{4x-24}{8x^6}$ 5) _____

6) $(x+2) \div \frac{x^2-9x+14}{x-8}$ 6) _____

Perform the indicated operation. Simplify if possible.

7) $\frac{64}{8x} + \frac{27}{3x}$ 7) _____

8) $-\frac{7}{18} - \frac{2x-3}{7x}$ 8) _____

9) $\frac{8a}{b} + \frac{2b}{3}$ 9) _____

10) $-\frac{7}{12} - \frac{6+3x}{4x}$ 10) _____

Solve the proportion.

11) $\frac{x}{48} = \frac{1}{16}$ 11) _____

12) $\frac{35}{x} = \frac{7}{6}$ 12) _____

13) $\frac{x+6}{5} = \frac{x+8}{7}$ 13) _____

14) $\frac{11}{2} = \frac{x-8}{x-4}$ 14) _____

Solve.

15) The ratio of a quarterback's completed passes to attempted passes is 7 to 8. If he attempted 24 passes, find how many passes he completed. Round to the nearest whole number if necessary. 15) _____

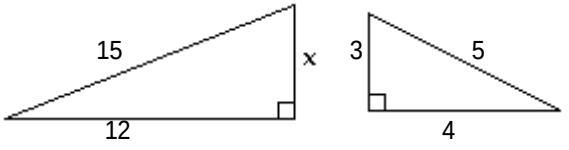
16) On an architect's blueprint, 1 inch corresponds to 6 feet. If an exterior wall is 39 feet long, find how long the blueprint measurement should be. Write answer as a mixed number if necessary. 16) _____

17) The scale on a map states that 1 centimeter corresponds to 20 kilometers. On the map, two cities are 0.3 cm apart. Find the actual distance. 17) _____

18) It is recommended that there be at least 11 square feet of work space for every person in a conference room. A certain conference room is 10 feet by 18 feet. Find the maximum number of people the room can accommodate. 18) _____

Given that the pair of triangles is similar, find the missing length.

19) 19) _____



20) 20) _____