Group Review Assignment (Chapter 7)

Name_____

MULTIPLE CHOICE. Choose the answer that best completes the statement or answers the question. Write your choice on the blank provided to the right. There is only one correct answer per question. You may write on this paper. If a question appears to not have instructions, the instructions for the previous question apply. Good luck.

Find the product and simplify.

1) $\frac{9x^4 - 72x}{3x^2 - 12} \cdot \frac{x^2 + x - 2}{4x^3 + 8x^2 + 16x}$ 1) _____

A) $\frac{3x(x + 1)}{4}$

B) $\frac{3x(x - 1)(x - 2)^2}{4(x + 2)^2}$

C) $\frac{3x(x - 1)}{4}$

D) $\frac{3(x - 1)}{4}$

Multiply or divide as indicated.

2) $\frac{x^2 - 25}{5y} \div \frac{5 - x}{30xy}$ 2) _____

A) $-6x(x + 5)$
B) $6x(x - 5)$
C) $6x(x + 5)$
D) $-6x(x - 5)$

Perform the indicated operation. Simplify if possible.

3) $\frac{4x}{x^2 - 6x + 8} - \frac{16}{x^2 - 6x + 8}$ 3) _____

A) $\frac{4(x - 4)}{(x + 4)(x - 2)}$

B) $\frac{4(x + 4)}{(x - 4)(x - 2)}$

C) $\frac{4}{x - 4}$

D) $\frac{4}{x - 2}$

Find the least common denominator (LCD).

4) $\frac{7}{8x + 32}, \frac{9}{x^2 + 4x}$ 4) _____

A) $8x + 4$

B) $8x^2 + 4$

C) $8x^2 + 32$

D) $8x(x + 4)$

Perform the indicated operation. Simplify if possible.

5) $\frac{8}{3x - 27} + \frac{x}{x^2 - 81}$ 5) _____

A) $\frac{9x + 72}{(x + 9)(x - 9)}$

B) $\frac{11x + 72}{3(x + 9)(x - 9)}$

C) $\frac{x + 8}{3(x + 9)(x - 9)}$

D) $\frac{11x}{(x + 9)(x - 9)}$

Solve the equation.

6) $\frac{x}{4} + \frac{9x}{5} = \frac{x}{20}$ 6) _____

A) 0
B) 180
C) 20
D) 45

Simplify the rational expression.

7) $\frac{x^2 + 11x + 30}{x^2 + 12x + 36}$ 7) _____

A) $\frac{x + 5}{x + 6}$

B) $\frac{11x + 5}{12x + 6}$

C) $\frac{11x + 30}{12x + 36}$

D) $-\frac{x^2 + 11x + 30}{x^2 + 12x + 36}$

Find the domain of the rational expression.

8) $f(x) = \frac{1 - 7x}{x^3 - 4x^2 - 45x}$ 8) _____

A) {x | x is a real number and $x \neq -9$, $x \neq -5$, $x \neq 0$}

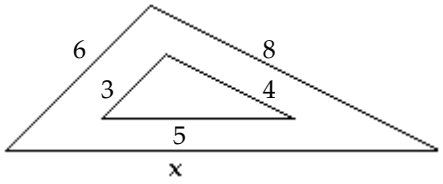
B) $\left\{x \mid x \text{ is a real number and } x \neq 9, x \neq -5, x \neq \frac{1}{7}, x \neq 0\right\}$

C) $\left\{x \mid x \text{ is a real number and } x \neq 9, x \neq -5, x \neq \frac{1}{7}\right\}$

D) {x | x is a real number and $x \neq 9$, $x \neq -5$, $x \neq 0$}

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

9) 9) _____



A) x = 15
B) x = 5
C) x = 11
D) x = 10

Solve.

10) Five divided by the difference of a number and 6 equals the quotient of 10 and the sum of the number and 8. Find the number. 10) _____

A) $\frac{20}{3}$

B) 20

C) $\frac{14}{5}$

D) –4

Solve the proportion.

11) $\frac{11}{12} = \frac{x - 10}{x - 4}$ 11) _____

A) – 62
B) – 76
C) 76
D) 6

Solve.

12) A cyclist bikes at a constant speed for 16 miles. He then returns home at the same speed but takes a different route. His return trip takes one hour longer and is 21 miles. Find his speed. 12) _____

A) 4 mph
B) 5 mph
C) 6 mph
D) 7 mph

13) Eight out of 10 adults in a certain city buy their drugs at large drug stores. If this city has 48,000 adults, how many of these adults would you expect to buy their drugs at large drug stores? 13) _____

A) 600 adults
B) 6000 adults
C) 3840 adults
D) 38,400 adults

Answer Key
Testname: 116_GRP_REV_ASS_CH7

1) D
2) A
3) D
4) D
5) B
6) A
7) A
8) D
9) D
10) B
11) C
12) B
13) D