Name_____

3 points each

MULTIPLE CHOICE. Circle the one alternative that best completes the statement or answers the question.

Insert either <, >, or = to make a true statement.

1) $|-8|$ _____ 7

    A) $<$ B) $>$ C) $=$

Add.

2) $\frac{5}{12} + \left(-\frac{1}{16}\right)$

    A) $\frac{1}{4}$ B) $\frac{1}{12}$ C) $\frac{68}{192}$ D) $\frac{17}{48}$

Evaluate.

3) $(-6)(3) - (-17)(8)$

    A) -118 B) 118 C) -154 D) 6

4) $-(-7)^2$

    A) 49 B) 14 C) -14 D) -49

Simplify.

5) $-5y + 2 - 4 + 6 + y - 4$

    A) $-4y$ B) $-6y$ C) $-4y - 1$ D) $-6y + 1$

Use the distributive property to remove parentheses.

6) $-6(2n + 8)$

    A) $-60n$ B) $-12n + 8$ C) $-4n + 2$ D) $-12n - 48$

Solve the equation.

7) $9n - 6 = 21$

    A) $n = 8$ B) $n = 18$ C) $n = 22$ D) $n = 3$

8) $\dfrac{2x}{5} - \dfrac{x}{3} = 5$

    A) $x = 150$ B) $x = -150$ C) $x = 75$ D) $x = -75$

9) $3x - 3 - 7x - 1 = 8x - 12x - 7$

    A) $x = 0$ B) $x = -224$ C) all real numbers   D) no solution

Use the distance formula.

10) Ashley drove home from school for Thanksgiving. She traveled 280 miles in 5 hours. What was her average speed?

    A) 53 mph   B) 275 mph   C) 61 mph   D) 56 mph

Use the formula to find the value of the variable indicated.

11) $P = 2l + 2w$; find l when $P = 24$ and $w = 4$.

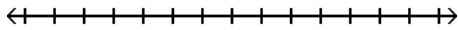   A) $l = 8$ B) $l = 16$ C) $l = 20$ D) $l = 10$
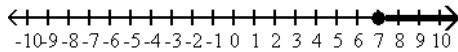
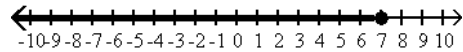Solve the inequality and graph the solution on a number line.

12) $-9x \geq 63$
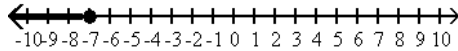
<———+——+——+——+——+——+——+——+——+——+——+——+——+——+——+——>
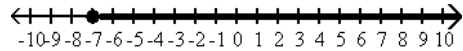
A) $x \geq 7$

<—+—+—+—+—+—+—+—+—+—+—+—+—+—+—+—+—●—+—+—>
-10-9-8-7-6-5-4-3-2-1 0 1 2 3 4 5 6 7 8 9 10

B) $x \leq 7$

<—+—+—+—+—+—+—+—+—+—+—+—+—+—+—+—+—●—+—+—>
-10-9-8-7-6-5-4-3-2-1 0 1 2 3 4 5 6 7 8 9 10

C) $x \leq -7$

<—+—●—+—+—+—+—+—+—+—+—+—+—+—+—+—+—+—+—+—>
-10-9-8-7-6-5-4-3-2-1 0 1 2 3 4 5 6 7 8 9 10

D) $x \geq -7$

<—+—+—●—+—+—+—+—+—+—+—+—+—+—+—+—+—+—+—+—>
-10-9-8-7-6-5-4-3-2-1 0 1 2 3 4 5 6 7 8 9 10

The results of a mathematics examination are given. Write the ratio in lowest terms.

13) Results: 12 A's, 6 B's, 5 C 's, 7 D's, 3 F's
A's to total grades

A) 4 : 33   B) 4 : 11   C) 4 : 7   D) 11 : 3

Solve the proportion for the variable by cross-multiplying.

14) $\frac{3}{x} = \frac{0.7}{4.2}$

A) $x = \frac{63}{5}$ B) $x = 18$ C) $x = \frac{147}{50}$ D) $x = \frac{21}{10}$

Write a proportion that can be used to solve the problem. Then solve the equation to obtain the answer.

15) It takes Mary Alice 22 minutes to type and spell check 14 pages of a manuscript. Find how long it takes her to type and spell check 49 pages. Round to the nearest whole number.

A) 1078 minutes   B) 77 minutes   C) 22 minutes   D) 31 minutes

Free Response : Include all important steps in arriving at your answer. Please circle your final answer.

Evaluate.

16) $[30 - (4 + 6) \div 2] - [1 + 9 \div 3]$

3

Evaluate the expression for the given value of the variable or variables.

17) $-2x^2 + 4x - 7;$ $x = -5$
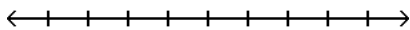
Simplify.

18) $-3(2x - 8) - 4x + 6$

Solve the equation.

19) $-9x + 2(3x - 6) = -10 - 5x$

Solve the inequality and graph the solution on a number line.

20) $-5x + 4 + 2x < 6 - 5x + 2$

MATH 080   Exam 1 (Chapters 1 and 2)   KEY

1) B
2) D
3) B
4) D
5) A
6) D
7) D
8) C
9) D
10) D
11) A
12) C
13) B
14) B
15) B
16) 21
17) -77
18) -10x + 30
19) x = 1
20) x < 2