3.2.22 Dividing Polynomials & Exponent Laws 2
MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Write a numerical expression for the phrase and simplify it.

1) The quotient of 45 and -5 decreased by -5   1) _____

  A) $\frac{45}{5} - 5; 4$ B) $\frac{45}{5} - (-5); 14$ C) $\frac{45}{-5} - 5; -14$ D) $\frac{45}{-5} - (-5); -4$

2) The quotient of -6 and -3   2) _____

  A) $\frac{-6}{-3}; \frac{1}{2}$ B) $\frac{-6}{-3}; 2$ C) $\frac{-3}{-6}; \frac{1}{2}$ D) $(-3)(-6); 18$

Solve the problem.

3) Connor recently sold some of his stock. He made a profit of $4 per share on 14 shares, made a   3) _____
profit of $8 per share on 7 shares, and had a loss of $4 per share on 9 shares. What was his net
profit/loss on the sale of stock.

  A) $76 loss   B) $148 profit   C) $76 profit   D) $148 loss

4) During a recent price war among car dealerships, 33 cars at one dealership were sold at a   4) _____
profit of $670 per car and 56 cars were sold at a loss of $590 per car. Find the net profit/loss for
this car dealership.

  A) $55,150 profit   B) $55,150 loss   C) $10,930 loss   D) $10,930 profit

Evaluate the expression.

5) cx^3 for c = -3 and x = 4   5) _____

  A) -48   B) -192   C) -36   D) 61

6) $8x^2 + 9y$ for x = 10 and y = 3   6) _____

  A) 6427   B) 2616   C) 162   D) 827

7) $2x^2yz$ for x = -3, y = 3, and z = -1   7) _____

  A) 54   B) 27   C) -54   D) -27

Simplify.

8) $\dfrac{6^2 + (14 - 5)^2}{16 \div 4 - (2 + 1)}$ 8) _____

  A) 117   B) 25   C) 207   D) 2172

9) $\dfrac{2^3 \cdot (-5 - 4) - 9(-2)}{163 + 5(-9 \cdot 4) + 8 \cdot 2}$ 9) _____

  A) -18   B) 18   C) -54   D) 54

10) $\dfrac{-25 + 5^2 - (-21)}{-24 - 9 + 36}$ 10) _____

  A) -7   B) 7   C) -8   D) 8

Evaluate the expression, given x = -2, y = 3, and a = -4.

11) $(-7a)(4x + 2y)$ 11) _____

    A) 224   B) 392   C) -56   D) 56

12) $-x^2 - (2y^2 - 6x)$ 12) _____

    A) -26   B) -2   C) -34   D) 26

13) $4a^3x - y^2(7y - 2x^2)$ 13) _____

    A) 629   B) -251   C) 395   D) -629

Find the quotient.

14) $\dfrac{-7}{0}$ 14) _____

    A) 1   B) Undefined   C) 7   D) 0

15) $\dfrac{0}{-16}$ 15) _____

    A) 1   B) 16   C) 0   D) undefined

16) $\dfrac{-117}{9}$ 16) _____

    A) 13   B) -13   C) $-\dfrac{1}{13}$ D) -23

Evaluate.

17) $|6 - 11 \cdot 2| \cdot |5 - 7^2 + 2|$ 17) _____

    A) 420   B) -420   C) 672   D) -672

18) $2(3^2 + 21) \div (-10)$ 18) _____

    A) $-\dfrac{159}{10}$ B) $\dfrac{159}{10}$ C) 6   D) -6

19) $-57 \div (5^2 - 6)$ 19) _____

    A) -3   B) $\dfrac{243}{25}$ C) $-\dfrac{243}{25}$ D) 3

20) $9 + 2(-9)$ 20) _____

    A) 9   B) -9   C) -99   D) 99

21) $-3^2(6 - 3^2)$ 21) _____

    A) -45   B) 27   C) 135   D) -27

22) $|8(2 - 7)| - |5 \cdot 2^2 - 26|$ 22) _____

    A) 150   B) 34   C) -34   D) 46

Solve.

23) On an expressway off-ramp, the road slopes downward five feet per 114 feet. Using a signed   23) _____
number, find the rate at which the road drops per foot.

A) $-\dfrac{114}{5}$ ft per foot

B) -5 ft per foot

C) $-\dfrac{1}{114}$ ft per foot

D) $-\dfrac{5}{114}$ ft per foot

24) When a low-pressure system moved through an area, the barometer dropped 18 millibars in   24) _____
three hours. Using a signed number, find the average drop per hour.

A) +6 millibars per hour

B) -54 millibars per hour

C) +54 millibars per hour

D) -6 millibars per hour

1) D
2) B
3) C
4) C
5) B
6) D
7) C
8) A
9) D
10) B
11) C
12) C
13) C
14) B
15) C
16) B
17) C
18) D
19) A
20) B
21) B
22) B
23) D
24) D