

Name \_\_\_\_\_

**MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.****Multiply. Be sure your answer is simplified.**

1)  $\frac{3}{9} \cdot \frac{9}{19}$  1) \_\_\_\_\_

- A)  $\frac{11}{9}$                       B)  $\frac{19}{27}$                       C)  $\frac{3}{19}$                       D)  $\frac{3}{7}$

2)  $\frac{4}{12} \cdot 10$  2) \_\_\_\_\_

- A)  $\frac{5}{3}$                       B)  $\frac{10}{3}$                       C)  $\frac{7}{6}$                       D)  $\frac{2}{15}$

**Divide. Be sure your answer is simplified.**

3)  $\frac{7x}{9} \div \frac{2x}{11}$  3) \_\_\_\_\_

- A)  $\frac{99}{14}$                       B)  $\frac{9}{20}$                       C)  $\frac{14}{99}$                       D)  $\frac{77}{18}$

4)  $\frac{3}{10} \div \frac{7}{16x}$  4) \_\_\_\_\_

- A)  $\frac{24x}{35}$                       B)  $\frac{23}{35x}$                       C)  $\frac{22x}{35}$                       D)  $\frac{24}{33}$

**Answer the question.**5) From nose to tail your German Shephard is 4 feet long. You have another dog who is about  $\frac{4}{5}$  of 5) \_\_\_\_\_

that length. How long is your second dog?

- A)  $1\frac{3}{5}$  feet                      B) 2 feet                      C)  $3\frac{1}{5}$  feet                      D)  $3\frac{1}{2}$  feet

**Perform the indicated operations. Be sure to simplify your answer.**

6)  $-\frac{8}{21} + \frac{9}{21}$  6) \_\_\_\_\_

- A)  $\frac{1}{2}$                       B)  $\frac{1}{3}$                       C)  $\frac{1}{7}$                       D)  $\frac{1}{21}$

Perform the indicated operation. Be sure to simplify your answer.

7)  $\frac{2}{5} + \frac{1}{15}$

7) \_\_\_\_\_

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

B)  $\frac{1}{5}$

C)  $\frac{7}{15}$

D)  $\frac{12}{25}$

8)  $\frac{7}{9} + \frac{9}{14}$

8) \_\_\_\_\_

A)  $\frac{16}{23}$

B)  $\frac{1}{2}$

C)  $\frac{179}{126}$

D)  $\frac{179}{23}$

Add or subtract. Simplify all answers. Express as a mixed number.

9)  $10\frac{1}{2} + 18\frac{1}{6}$

9) \_\_\_\_\_

A)  $10\frac{2}{3}$

B)  $27\frac{2}{3}$

C)  $29\frac{2}{3}$

D)  $28\frac{2}{3}$

10)  $14\frac{4}{7} - \frac{16}{21}$

10) \_\_\_\_\_

A) 13

B)  $13\frac{17}{21}$

C)  $12\frac{17}{21}$

D)  $14\frac{17}{21}$

Multiply or divide and simplify your answer.

11)  $5\frac{1}{5} \div 3\frac{7}{9}$

11) \_\_\_\_\_

A)  $1\frac{33}{85}$

B)  $2\frac{32}{85}$

C)  $1\frac{32}{84}$

D)  $1\frac{32}{85}$

Simplify.

12)  $7 \cdot 2^2 - \frac{1}{5}$

12) \_\_\_\_\_

A)  $\frac{139}{5}$

B)  $\frac{69}{5}$

C)  $\frac{19}{5}$

D) 28

13)  $\frac{3}{2} + \left(\frac{1}{2}\right)^2 - \frac{3}{7}$

13) \_\_\_\_\_

A)  $\frac{11}{7}$

B)  $\frac{65}{28}$

C)  $\frac{37}{28}$

D)  $-\frac{23}{28}$

14)  $\frac{\frac{8}{17}}{\frac{1}{6}}$  14) \_\_\_\_\_

- A)  $\frac{11}{35}$       B)  $\frac{48}{17}$       C)  $\frac{17}{48}$       D)  $\frac{4}{51}$

**Solve the problem.**

15) Robert and Paul each took some chips from a bag of potato chips which contains  $9\frac{1}{2}$  ounces of chips. Robert took  $2\frac{1}{3}$  ounces of chips and Paul took  $1\frac{5}{6}$  ounces of chips. How many ounces of chips were left in the bag? 15) \_\_\_\_\_

- A)  $6\frac{1}{3}$  ounces      B)  $5\frac{1}{3}$  ounces      C)  $6\frac{2}{3}$  ounces      D)  $7\frac{2}{3}$  ounces

**Solve and check your solutions.**

16)  $-\frac{1}{7}x = -7$  16) \_\_\_\_\_

- A)  $x = -14$       B)  $x = 49$       C)  $x = 1$       D)  $x = -15$

17)  $-\frac{4}{9}x = -\frac{7}{8}$  17) \_\_\_\_\_

- A)  $x = \frac{63}{32}$       B)  $x = -\frac{63}{32}$       C)  $x = \frac{32}{63}$       D)  $x = \frac{63}{8}$

**Simplify and then solve.**

18)  $\frac{x}{2^2} = 8 + 6 \div 3$  18) \_\_\_\_\_

- A)  $x = 24$       B)  $x = 56$       C)  $x = 14$       D)  $x = 40$

**Identify the terms of the polynomial expression.**

19)  $4x^5 - 6x^4 + 3x + 4$  19) \_\_\_\_\_

- A)  $4x^5, 6x^4, 3x, 4$       B)  $-4x^5, -6x^4, -3x, -4$   
 C)  $4, -6, 3, 4$       D)  $4x^5, -6x^4, 3x, 4$

**Perform the indicated operation.**

20)  $(7x^2 - 2x + 6) + (-3x^2 - 2x + 6)$  20) \_\_\_\_\_

- A)  $4x^2 - 2x + 12$       B)  $4x^2 - 4x + 12$   
 C)  $-21x^2 - 2x + 12$       D)  $4x^4 - 4x^2 + 12$

21)  $(7a^2 + 8a - 3) - (-9a^2 + 1)$  21) \_\_\_\_\_

- A)  $16a^2 + 8a - 4$       B)  $-2a^2 + 7a - 3$       C)  $16a^2 + 7a - 3$       D)  $-2a^2 + 8a - 2$

**Multiply.**

22)  $-8y(5y^2 + 8y + 7)$  22) \_\_\_\_\_  
A)  $-40y^3 + 8y + 7$  B)  $-40y^2 - 64y - 56$   
C)  $-40y^3 - 64y^2 - 56y$  D)  $-40y^3 - 64y^2 - 56$

23)  $8x^2(-5x^7 - 10x^3)$  23) \_\_\_\_\_  
A)  $-120x^2$  B)  $-40x^9 - 80x^5$   
C)  $-120x^9 - 120x^5$  D)  $-40x^9 - 10x^3$

**Use FOIL to multiply.**

24)  $(x+3)(x+9)$  24) \_\_\_\_\_  
A)  $x^2 + 11x + 27$  B)  $x^2 + 12x + 11$  C)  $x^2 + 27x + 12$  D)  $x^2 + 12x + 27$

25)  $(2x+7)(x-2)$  25) \_\_\_\_\_  
A)  $x^2 - 14x + 3$  B)  $2x^2 + 2x - 14$  C)  $x^2 + 3x + 2$  D)  $2x^2 + 3x - 14$

**Multiply.**

26)  $(5x-1)(x^2-2x+1)$  26) \_\_\_\_\_  
A)  $5x^3 - 10x^2 + 5x + 1$  B)  $5x^3 - 11x^2 + 7x - 1$   
C)  $5x^3 + 11x^2 - 7x + 1$  D)  $5x^3 - 9x^2 + 3x - 1$

**Define the variable expressions and simplify.**

27) John has 14 more dollars than Bill has. Victor has 7 less dollars than Bill has. Let  $x$  be the number of dollars Bill has. Give the number of dollars Victor has plus the number of dollars Bill has minus the number of dollars John has. 27) \_\_\_\_\_  
A)  $x - 7$  B)  $2x + 21$  C)  $3x + 7$  D)  $x - 21$

**Find the greatest common factor of the list of items.**

28) 8 and 40 28) \_\_\_\_\_  
A) 5 B) 40 C) 8 D) 4

29)  $14m^5, 56m^8$  29) \_\_\_\_\_  
A)  $784m^3$  B)  $14m^3$  C)  $56m^5$  D)  $14m^5$

**Factor. Check by multiplying.**

30)  $27x^6y + 15xy^3$  30) \_\_\_\_\_  
A)  $3y(9x^6 + 5xy^2)$  B)  $xy(27x^5 + 15y^2)$   
C)  $3xy(9x^5 + 5y^2)$  D)  $3x(9x^5y + 5y^3)$

31)  $12x^2 - 6x$  31) \_\_\_\_\_  
A)  $x(12x - 6)$  B)  $6(2x^2 + x)$  C)  $6(2x^2 - x)$  D)  $6x(2x - 1)$

32)  $40m^9 - 40m^5 - 28m^3$

A)  $m^3(40m^6 - 40m^2 - 28)$

C)  $4(10m^9 - 10m^5 - 7m^3)$

B)  $4m^3(10m^6 - 10m^2 - 7)$

D) no common factor

32) \_\_\_\_\_

Answer Key

Testname: M255-CH5-6-PRACTICE-EXAM

- 1) C
- 2) B
- 3) D
- 4) A
- 5) C
- 6) D
- 7) C
- 8) C
- 9) D
- 10) B
- 11) D
- 12) A
- 13) C
- 14) B
- 15) B
- 16) B
- 17) A
- 18) D
- 19) D
- 20) B
- 21) A
- 22) C
- 23) B
- 24) D
- 25) D
- 26) B
- 27) D
- 28) C
- 29) D
- 30) C
- 31) D
- 32) B