

Print Name _____

MULTIPLE CHOICE. Choose the answer that best completes the statement or answers the question. Clearly write your choice in the blank provided. Also fill in the scantron answer sheet. There is only one answer per question. If a question appears to have no instructions, use the instructions for the previous question. Good luck and have fun!

Perform the division.

1)
$$\frac{35x^7 + 10x^6 + 35x^5}{5x^6}$$

1) _____

A) $7x + 2$

B) $7x + 2 + \frac{7}{x}$

C) $14x + 2$

D) $7x + 10x^6 + \frac{7}{x}$

2)
$$\frac{-12x^1 - 28x^{-1}}{4x^{-3}}$$

2) _____

A) $-3x^4 - 7x^2$

B) $-3x^4 - 28x^{-1}$

C) $-10x^3$

D) $-12x^1 - 7x^2$

Perform the indicated operation.

3) $7z - (14 - 4z)$

3) _____

A) $3z + 14$

B) $11z + 14$

C) $11z - 14$

D) $3z - 14$

4) $(20x + 6) - (-3x^2 - 10x + 6)$

A) $-3x^2 + 10x + 12$

B) $3x^2 + 30x - 12$

C) $3x^2 + 30x$

D) $3x^2 - 30x$

4) _____

Multiply.

5) $(a - 9)(a + 9)$

A) $a^2 - 81$

B) $a^2 - 18a - 81$

C) $a^2 - 18$

D) $a^2 + 18a - 81$

5) _____

6) $-4x^2(8x^2 + 7x - 4)$

A) $-32x^4 - 28x^2 + 16$

B) $-32x^4 - 28x^3 + 16x^2$

C) $4x^4 + 3x - 8$

D) $-32x^4 - 28x + 16$

6) _____

7) $(b - 9)(b - 7)$

A) $b^2 - 16b + 63$

B) $b^2 + 16b - 63$

C) $2b + 63$

D) $2b^2 - 63$

7) _____

- 8) $(x^2 + 3y)(x^2 - 3y)$
 A) $x^4 + 6x^2y - 9y^2$
 B) $x^4 - 9y^2$
 C) $x^4 - 6y^2$
 D) $x^4 - 6x^2y - 9y^2$

8) _____

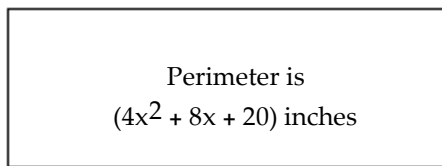
- 9) $(7x - 1)(x^2 - 4x + 1)$
 A) $7x^3 - 29x^2 + 11x - 1$
 B) $7x^3 + 29x^2 - 11x + 1$
 C) $7x^3 - 28x^2 + 7x + 1$
 D) $7x^3 - 27x^2 + 3x - 1$

9) _____

Solve.

- 10) The perimeter of a rectangle is $(4x^2 + 8x + 20)$ inches and its length is $(x^2 + 3x + 6)$ inches. Find its width.

10) _____

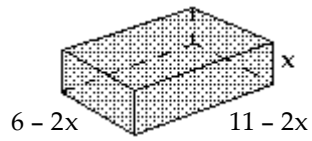


Length is $(x^2 + 3x + 6)$ inches

- A) $(2x^2 + 4x + 10)$ in.
 B) $(\frac{8}{3}x + \frac{22}{3})$ in.
 C) $(x^2 + x + 4)$ in.
 D) $(3x^2 + 5x + 14)$ in.

11) Find the volume of the rectangular solid. Express the volume as a product, then multiply and simplify.

11) _____



A) $4x^2 - 34x + 67$

B) $4x^3 - 34x^2 + 66x$

C) $-4x^2 + 14x + 67$

D) $-4x^3 + 14x^2 + 66x$

Write the number in scientific notation.

12) 44,000,000

12) _____

A) 4.4×10^{-7}

B) 4.4×10^6

C) 4.4×10^{-6}

D) 4.4×10^7

Evaluate the expression.

13) -6^2

13) _____

A) 12

B) 36

C) -36

D) -12

Simplify.

14) If $P(x) = -3x + 6$, find $P(-5)$.

14) _____

A) 21

B) 9

C) -9

D) -21

Use the power rule and the power of a product or quotient rule to simplify the expression.

15) $\left(\frac{xy}{4}\right)^4$

15) _____

A) $\frac{x^4y^4}{4}$

B) $\frac{x^4y^4}{256}$

C) $\frac{xy}{256}$

D) $\frac{xy^4}{256}$

Simplify the expression.

16) $-9y^0$

16) _____

A) -8

B) 0

C) -9

D) 1

Fill in the blank.

- 17) A _____ is a number or the product of numbers and variables raised to powers. 17) _____
- A) binomial
 - B) FOIL
 - C) coefficient
 - D) term
- 18) The _____ property is used to multiply $2x(x - 4)$. 18) _____
- A) monomial
 - B) FOIL
 - C) distributive
 - D) binomial
- 19) The _____ of a term is its numerical factor. 19) _____
- A) degree of a term
 - B) monomial
 - C) coefficient
 - D) FOIL

Write the number in standard notation.

- 20) 4.406×10^{-5} 20) _____
- A) 0.00004406
 - B) 0.000004406
 - C) 0.0004406
 - D) -440,600

Simplify the expression. Write the result using positive exponents only.

$$21) \frac{x^2(x^{-2})^{-5}}{(x^{-3})^{-2}}$$

21) _____

A) x^6

B) $\frac{1}{x^{14}}$

C) x^{10}

D) x^{14}

Answer Key

Testname: UNTITLED1

- 1) B
Objective: (5.6) Divide a polynomial by a monomial.
- 2) A
Objective: (5.6) Divide a polynomial by a monomial.
- 3) C
Objective: (5.2) Add and subtract polynomials.
- 4) C
Objective: (5.2) Add and subtract polynomials.
- 5) A
Objective: (5.4) Multiply the sum and difference of two terms.
- 6) B
Objective: (5.4) Use the distributive property to find the product of two polynomials.
- 7) A
Objective: (5.3) Use the distributive property to multiply polynomials.
- 8) B
Objective: (5.4) Multiply the sum and difference of two terms.
- 9) A
Objective: (5.3) Use the distributive property to multiply polynomials.
- 10) C
Objective: (5.6) Concept Extensions
- 11) B
Objective: (5.3) Use the distributive property to multiply polynomials.
- 12) D
Objective: (5.5) Write numbers in scientific notation.
- 13) C
Objective: (5.1) Evaluate exponential expressions.
- 14) A
Objective: (5.2) Define polynomial functions.
- 15) B
Objective: (5.1) Use the power rules for products and quotients.
- 16) C
Objective: (5.1) Use the definition of a number raised to the 0 power.
- 17) D
Objective: (5.8) Vocabulary Check
- 18) C
Objective: (5.8) Vocabulary Check
- 19) C
Objective: (5.8) Vocabulary Check
- 20) A
Objective: (5.5) Convert numbers from scientific notation to standard form.
- 21) A
Objective: (5.5) Use all the rules and definitions for exponents to simplify exponential expressions.