

Student: _____

Instructor: Kaddour Boukaabar

Assignment: Review For Math

Date: _____

Program: CMAP8N Parts A_B_C_D

Assessment & Placement: Part B

1. Simplify $(5x^2y^3z)^2(x^3y)^4$.

Choose the correct simplified expression below.

- A. $25x^{16}y^{10}z^2$
- B. $25x^{48}y^{24}z^2$
- C. $25x^{11}y^9z^2$
- D. $25x^{28}y^{20}z^2$

2. Add and simplify.

$$\frac{7}{27} + \frac{1}{6}$$

$$\frac{7}{27} + \frac{1}{6} = \underline{\hspace{2cm}}$$

(Type a simplified fraction.)

3. Simplify the expression. Use positive exponents. Assume variables represent nonzero real numbers.

$$(4p^2s^4)^4(s^3)$$

- A. $4p^8s^{19}$
- B. $256p^6s^{48}$
- C. $256p^6s^{11}$
- D. $256p^8s^{19}$

4. Factor the trinomial.

$$2v^2 - 12v + 16$$

Select the correct choice below and, if necessary, fill in the answer box within your choice.

- A. The answer is _____ . (Factor completely.)
- B. The trinomial is not factorable.

5. Factor by grouping.

$$15a^2 - 34a + 15$$

$$15a^2 - 34a + 15 = \underline{\hspace{2cm}}$$

6. Simplify.

$$|4 - 3|$$

- A. 1
- B. 2
- C. 0
- D. -1

7. About 8 out of 10 people entering a community college need to take a refresher mathematics course. If there are 880 entering students, how many will probably need a refresher mathematics course?

About _____ students will need a refresher mathematics course.

8. Perform the indicated operation.

$$(4n^6 + 19n^4 - 11) - (7n^4 + 8n^6 + 3)$$

- A. $-4n^6 + 12n^4 - 14$
- B. $-4n^6 + 12n^4 - 8$
- C. $-4n^6 + 27n^4 - 8$
- D. $-6n^{10}$

9. What is the value of the expression $2x^2 + 3xy - 4y^2$ when $x = 2$ and $y = -3$?

- A. -46
- B. -26
- C. 26
- D. 46

10. Solve.

$$5(x + 4) = 7(x - 2)$$

$x =$ _____

11. Simplify.

$$240 \div 8 - 3$$

- A. 27
- B. 48
- C. 235
- D. 229

12. Simplify.

$$6^3 \div 12 - 10$$

- A. 108
- B. 214
- C. 8
- D. 27

13. Perform the division. Write the answer with positive exponents.

$$\frac{-12x^{10} - 27x^7}{-3x^4}$$

- A. $4x^6 - 27x^7$
 B. $-12x^{10} + 9x^3$
 C. $13x^{13}$
 D. $4x^6 + 9x^3$
-

14. Complete the factoring.

$$x^2 - 12x + 36 = (x - 6)(\quad)$$

- A. $x + 6$
 B. $x - 6$
 C. $6 - x$
 D. $x^2 + 6$
-

15. Find the root.

$$\sqrt[5]{32}$$

- A. 3
 B. 2
 C. 6.4
 D. Not a real number
-

16. Change the word statement to an equation. Use x as the variable.

When 2 times a number is subtracted from 7 times the number, the result is 35.

- A. $2(x - 7) = 35x$
 B. $2x(7 - x) = 35$
 C. $7x - 2x = 35$
 D. $2x + 7x = 35$
-

17. Divide. Write the answer in lowest terms.

$$\frac{3x^2}{4} \div \frac{x^3}{20}$$

- A. $\frac{60x^2}{4x^3}$
- B. $\frac{15}{x}$
- C. $\frac{15x^2}{x^3}$
- D. $\frac{x}{15}$

18. Find the root.

$$\sqrt[3]{-27}$$

- A. -2.598
- B. -3
- C. -5.196
- D. Not a real number

19. Find the root.

$$\sqrt[4]{-1,296}$$

- A. 36
- B. -6
- C. 6
- D. Not a real number

20. Use the power rules for exponents to simplify. Write the answer in exponential form.

$$(3x^2y^3)^2$$

- A. $9x^4y^6$
- B. $3x^4y^5$
- C. $9x^4y^5$
- D. $3x^4y^6$

21. Simplify: $(3x - 4)(2x + 9) =$

- A. $25x + 36$
 B. $x + 5$
 C. $6x^2 + 19x - 36x$
 D. $6x^2 + 19x - 36$

22. Simplify: $(4x^2 - 3x + 6) - (2x^2 + 9x - 9) =$

- A. $2x^2 - 12x + 15$
 B. $2x^2 - 12x - 3$
 C. $2x^2 + 6x - 3$
 D. $6x^2 + 6x + 15$

23. Simplify the expression. Use positive exponents. Assume variables represent nonzero real numbers.

$$(3p^3s^2)^4(s^2)$$

- A. $81p^7s^{16}$
 B. $81p^{12}s^{10}$
 C. $81p^7s^8$
 D. $3p^{12}s^{10}$

24. A security fence is to be built around a 251 m by 151 m field. What is the perimeter of the field? Fence wire will cost \$2.79 per meter. What will the wire cost?

151 m



251 m

The perimeter of the field is _____ m.

The wire will cost \$ _____.

25. Factor completely.

$$49y^4 - 36$$

- A. Prime
 B. $(7y^2 - 6)^2$
 C. $(7y^2 + 6)(7y^2 - 6)$
 D. $(7y^2 + 6)^2$

26. Simplify the radical. Assume that all variables represent nonnegative real numbers.

$$\sqrt{25m^{21}}$$

- A. $5m^{10}\sqrt{m}$
- B. $5m^{11}$
- C. $5m^{10}$
- D. $5m^9\sqrt{m}$

27. Simplify: $(5x^2 - 2x + 8) - (2x^2 + 5x - 9) =$

- A. $3x^2 + 3x - 1$
- B. $7x^2 + 3x + 17$
- C. $3x^2 - 7x + 17$
- D. $3x^2 - 7x - 1$

28. Simplify.

$$6^3 \div 12 - 9$$

- A. 8
- B. 72
- C. 213
- D. 9

29. Simplify the expression by using the order of operations.

$$18 \div 3 \cdot (12 - 4)$$

- A. 48
- B. 68
- C. 96
- D. 76

30. Complete the factoring.

$$4a^2 + 20a - 24 = 4(\quad)(\quad)$$

$$4a^2 + 20a - 24 = 4 \underline{\hspace{2cm}}$$

31. If $3r = 8t + 7$, what is the value of t ?

- A. $t = \frac{3r+7}{8}$
- B. $t = \frac{3r}{8} + 7$
- C. $t = \frac{3r}{8} - 7$
- D. $t = \frac{3r-7}{8}$

32. Evaluate the polynomial.

$$7x + 8 \text{ for } x = 9$$

- A. 71
- B. 15
- C. 55
- D. 126

33. Simplify the expression. Use positive exponents. Assume variables represent nonzero real numbers.

$$(5p^6)(-8p^2)$$

- A. $40p^{12}$
- B. $-40p^{12}$
- C. $40p^8$
- D. $-40p^8$

34. One factor of $x^2 - x - 20$ is:

- A. $(x - 5)$
- B. $(x - 4)$
- C. $(x + 5)$
- D. $(x - 20)$

35. Find the square.

$$(2m + 11)^2$$

- A. $2m^2 + 121$
- B. $4m^2 + 121$
- C. $4m^2 + 44m + 121$
- D. $2m^2 + 44m + 121$

36. Factor completely.

$$25s^2 - 121t^4$$

- A. $(5s + 11t^2)(5s - 11t^2)$
- B. $(5s - 11t^2)^2$
- C. $(5s + 11t^2)^2$
- D. Prime
-

37. $\sqrt{6} \times \sqrt{7} = ?$

- A. 42
- B. $\sqrt{42}$
- C. $\sqrt{13}$
- D. 13

1. A. $25x^{16}y^{10}z^2$

2. $\frac{23}{54}$

3. D. $256p^8s^{19}$

4. A. The answer is $2(v - 4)(v - 2)$. (Factor completely.)

5. $(3a - 5)(5a - 3)$

6. A. 1

7. 704

8. A. $-4n^6 + 12n^4 - 14$

9. A. -46

10. 17

11. A. 27

12. C. 8

13. D. $4x^6 + 9x^3$

14. B. $x - 6$

15. B. 2

16. C. $7x - 2x = 35$

17. B. $\frac{15}{x}$

18. B. -3

19. D. Not a real number

20. A. $9x^4y^6$

21. D. $6x^2 + 19x - 36$

22. A. $2x^2 - 12x + 15$

23. B. $81p^{12}s^{10}$

24. 804

2243.16

25. C. $(7y^2 + 6)(7y^2 - 6)$

26. A. $5m^{10}\sqrt{m}$

27. C. $3x^2 - 7x + 17$

28. D. 9

29. A. 48

30. $(a - 1)(a + 6)$

31. D. $t = \frac{3r - 7}{8}$

32. A. 71

33. D. $-40p^8$

34. A. $(x - 5)$

35. C. $4m^2 + 44m + 121$

36. A. $(5s + 11t^2)(5s - 11t^2)$

37. B. $\sqrt{42}$
