

Algebra 1
Practice Chapter 8 Test

NAME _____

Write the letter for the BEST answer. (3 Points each)

1. Factor the monomial $24x^3y^2$. completely.

A. $2 \cdot 2 \cdot 3 \cdot x \cdot x \cdot x \cdot y \cdot y$

B. $2 \cdot 2 \cdot 3 \cdot 3 \cdot x \cdot x \cdot x \cdot y \cdot y$

C. $2 \cdot 2 \cdot 2 \cdot 3 \cdot x \cdot x \cdot x \cdot y \cdot y$

D. $4 \cdot 6 \cdot x \cdot x \cdot x \cdot y \cdot y$

2. Find the GCF of $24x^4y^2$ and $36x^3y^5$.

A. $6x^4y^5$

B. $12x^4y^5$

C. $6x^3y^2$

D. $12x^3y^2$

1. _____

3. Factor $3x^2 - 12x + 9$ by GCF.

A. $3(x^2 - 4x + 3)$

B. $3(x^2 - 9x + 3)$

C. $3(x^2 + 4x + 3)$

D. $3(x^2 + 9x + 3)$

2. _____

3. _____

4. _____

4. Factor $4x^2 + 12x - 5x - 15$ by Grouping.

A. $(4x + 5)(x - 3)$

B. $(4x - 5)(x + 3)$

C. $(4x - 3)(x + 5)$

D. $(4x + 3)(x - 5)$

5. _____

6. _____

5. Factor $x^2 - 12x + 36$ by Perfect Square Trinomial.

A. $(x - 18)^2$

B. $(x - 6)^2$

C. $(x - 6)(x + 6)$

D. $(x + 6)^2$

7. _____

8. _____

6. Factor $x^2 - 10x + 24$ by General Trinomial.

A. $(x - 4)(x - 6)$

B. $(x - 2)(x + 12)$

C. $(x - 6)(x + 4)$

D. $(x - 12)(x + 2)$

7. Factor $5x^2 + 13x - 6$ by General Trinomial.

A. $(5x - 2)(x + 3)$

B. $(5x - 3)(x + 2)$

C. $(5x + 2)(x - 3)$

D. $(5x + 3)(x - 2)$

Points(24) _____

8. Factor $4x^2 - 49$ by Difference of Two Squares.

A. $(2x - 7)^2$

B. $(2x - 7)(2x + 7)$

C. $(4x + 7)(4x - 7)$

D. $(4x + 7x)(4x - 7x)$

9. Factor $2x^2 + 9x - 5$.

- A. $(2x + 1)(x - 5)$
- C. $(2x + 5)(x - 1)$

- B. $(2x - 1)(x + 5)$
- D. $(2x - 5)(x + 1)$

10. Factor $2x^2 - 2x - 24$.

- A. $2(x + 3)(x - 4)$
- C. $2(x - 3)(x + 4)$

- B. $(x + 3)(x - 4)$
- D. $(x - 3)(x + 4)$

9. _____

10. _____

11. Factor $3x^2 - 48$.

- A. $(3x + 4)(3x - 4)$
- C. $(3x + 4)(x - 4)$

- B. $3(x - 4)(x + 4)$
- D. $3(x - 4)^2$

11. _____

12. _____

12. Factor $4x^2 + 12x + 9$.

- A. $(2x + 3)^2$
- C. $(2x + 3)(2x - 3)$

- B. $(2x - 3)^2$
- D. *prime*

13. _____

14. _____

15. _____

13. Factor $2x^2 - 14x + 24$.

- A. $(x - 3)(x - 4)$
- C. $(2x - 6)(x - 8)$

- B. $2(x + 3)(x + 4)$
- D. $2(x - 3)(x - 4)$

16. _____

14. Factor $4x^2 + 11x - 6$.

- A. $(4x + 3)(x - 2)$
- C. $(4x + 3)(x + 2)$

- B. $(4x - 3)(x + 2)$
- D. *prime*

15. Factor $x^2 - 11x + 28$.

- A. $(x - 4)(x - 7)$
- C. $(x + 4)(x + 7)$

- B. $(x - 2)(x - 14)$
- D. *prime*

Points(24) _____

16. Factor $4x^2 - 12x + 3x - 9$.

- A. $(4x + 3)(x - 3)$
- C. $(4x)(x + 3)$

- B. $(4x - 3)(x + 3)$
- D. $(4x)(x - 3)$

17. Factor $18x^2 - 50$.

A. $2(3x - 5)^2$

C. $2(3x - 5)$

B. $2(3x + 5)(3x - 5)$

D. *prime*

18. Factor $5x^2 + 30x - 40$.

A. $5(x + 4)(x - 2)$

C. $5(x^2 + 6x - 8)$

B. $5(x - 4)(x + 2)$

D. *prime*

19. Factor $6x^2 - 22x + 16$.

A. $2(3x + 8)(x + 1)$

C. $2(3x - 8)(x - 1)$

B. $(x - 1)(3x - 8)$

D. *prime*

17. _____

18. _____

20. Factor $x^2 + 12x + 32$.

A. $(x - 8)(x - 4)$

C. $(x - 8)(x + 4)$

B. $(x + 8)(x + 4)$

D. *prime*

19. _____

20. _____

21. Factor $4x^2 - 4x - 15$.

A. $(2x + 3)(2x - 5)$

C. $(2x - 3)(2x + 5)$

B. $(2x - 3)(2x - 5)$

D. *prime*

21. _____

22. _____

22. Factor $6x^2 - 12x - 5x + 10$.

A. $(6x - 5)(x - 2)$

C. $6(x - 5)(x - 2)$

B. $(6x + 5)(x - 2)$

D. *prime*

24. _____

25. _____

23. Factor $2x^2 + 20x + 48$.

A. $2(x - 6)(x + 4)$

C. $2(x + 12)(x - 2)$

B. $2(x + 6)(x + 4)$

D. $2(x + 12)(x + 2)$

Points(27)_____

24. Factor $x^2 - 8x - 20$.

A. $(x + 2)(x - 10)$

C. $(x - 2)(x + 10)$

B. $(x + 2)(x + 10)$

D. $(x - 2)(x - 10)$

25. Factor $3x^2 - 18x + 27$.

A. $3(x - 3)(x + 3)$

C. $3(x + 3)^2$

B. $3(x - 3)(x - 3)$

D. $3(x - 3)^2$

26. Solve $x^2 - 9x + 18 = 0$

- A. 3, 6 B. -3, -6 C. -3, 6 D. 3, -6

27. Solve $x^2 - 36 = 0$

- A. 6 B. -6 C. -6, 6 D. -12

28. Solve $x^2 + 14x + 49 = 0$

- A. 7 B. -7 C. -7, 7 D. -14

29. Solve $2x^2 - 7x = 15$

- A. $-\frac{3}{2}, -5$ B. $-\frac{3}{2}, 5$ C. $\frac{3}{2}, -5$ D. $\frac{3}{2}, 5$

30. Solve $2x^2 + 4x - 16 = 0$

- A. 0, -4, 2 B. -2, 4 C. 0, -2, 4 D. 2, -4

31. Solve $2x^2 - 12x = 0$

- A. 6 B. -6 C. 0, 6 D. 0, -6

32. Solve $x^2 + 8x = 20$

- A. 0, 10, -2 B. 0, -10, 2 C. -10, 2 D. 10, -2

33. Solve $4x^2 + 8x = 5$

- A. $-\frac{5}{2}, \frac{1}{2}$ B. $\frac{5}{2}, -\frac{1}{2}$ C. $-\frac{5}{2}, -\frac{1}{2}$ D. $\frac{5}{2}, \frac{1}{2}$

26. _____

27. _____

28. _____

29. _____

30. _____

31. _____

32. _____

33. _____

Points(24) _____