Name_____ **Date** _____

CURRICULUM AND INSTRUCTIONAL SERVICES
MATHEMATICS COMMON ASSESSMENT REVIEW
Algebra 1B (311014)

Show work throughout the assessment.

Write the correct letter choice in the blank provided. (1 pt. each)

1. What is the greatest common factor of 8 and 36? 1._____

A. 8 B. 16 C. 2 D. 4

2. What is the greatest monomial factor of $4x^3 + 16x^2$? 2._____

A. 4 B. $4x^3$
C. $2x$ D. $4x^2$

3. What is the greatest monomial factor of $10x^4 - 35x$? 3._____

A. $10x^2$ B. x
C. $5x$ D. $5x^4$

4. Which is the completely factored form of $7x^2 + 49x$? 4._____

A. $x(7x + 49)$ B. $7(x^2 + 7x)$
C. $7x(x^2 + 7x)$ D. $7x(x + 7)$

5. Which is the completely factored form of $2x\left(x^2 - x - 20\right)$? 5._____

A. $2x(x + 5)(x - 4)$ B. $2x(x - 5)(x + 4)$
C. $2x(x - 10)(x + 2)$ D. $2x(x + 4)(x + 5)$

REVIEW

6. Which expression is equivalent to $\sqrt{24}$? 6._____

A. $4\sqrt{6}$ B. $2\sqrt{4}$
C. $2\sqrt{6}$ D. $3\sqrt{8}$

7. Which expression is equivalent to $\sqrt{30} \cdot \sqrt{3}$ in its simplest form? 7._____

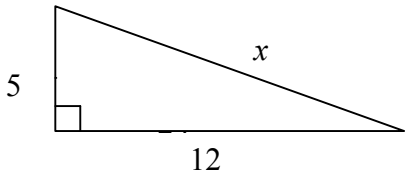
A. $3\sqrt{10}$ B. $9\sqrt{10}$
C. $5\sqrt{6}$ D. $3\sqrt{30}$

8. Which expression is the product of $(3x+5)(3x-5)$? 8._____

A. $3x^2 - 25$ B. $9x^2 - 30x - 25$
C. $9x^2 - 25$ D. $6x^2 - 10$

Solve the following;

9. Given a right triangle with side lengths 5 and 12, what is the length of the hypotenuse? (2 pts) 9._____



REVIEW

Find the sum or difference.

10. $(m^2 + 2m - 5) + (-4m^2 - 6m + 9)$ (3 pts) 10._____

11. $\left(12y^2 - 6y - 21\right) + \left(3y^2 + 14y + 18\right)$ (3 pts) 11._____

12. $\left(5y^2 - 10y + 7\right) - \left(2y^2 - 6y + 2\right)$ (3 pts) 12._____

13. $\left(d^3 + 6\right) - \left(-5d^3 - 13d - 5\right)$ (3 pts) 13._____

Find the product.

14. $(m - 2)(m + 8)$ (2 pts) 14._____

15. $(3a + 10)(a + 4)$ (2 pts) 15. _____

16. $(12d + 7)(12d - 7)$ (2 pts) 16._____

REVIEW

Find the product.

17. $(5r-3)(8r+7)$ (2 pts) 17._____

18. $(x+3)(x^2-7x+9)$ (3 pts) 18._____

Factor each polynomial completely.

19. x^2-100 (2 pts) 19._____

20. $x^2+15x+56$ (2 pts) 20._____

21. $x^2-14x+48$ (2 pts) 21._____

22. x^2-x-42 (2 pts) 22._____

23. $x^2+2x-63$ (2 pts) 23._____

24. $4x^2+13x+3$ (3 pts) 24._____

25. $4x^2-4x-15$ (3 pts) 25. _____

26. $6x^2+6x-72$ (3 pts) 26._____

REVIEW

Solve each equation using factoring.

27. $x^2 - 4x - 12 = 0$ (3pts) 27. _____

28. $9p^2 - 36p = 0$ (3 pts) 28._____

29. $x^2 - 11x + 24 = 0$ (3 pts) 29._____

30. $3x^2 - 5x = 12$ (4 pts) 30._____

Solve the equation using square roots. Round to the nearest hundredth, if necessary.

31. $x^2 - 49 = 0$ (2 pts) 31._____

32. $(x-3)^2 = 16$ (2 pts) 32._____

33. $9x^2 + 1 = 37$ (2 pts) 33._____

REVIEW

Solve the equation using quadratic formula. Round both answers to the nearest hundredth.

34. $x^2 - 2x - 10 = 0$ (3 pts) 34._____

35. $3x^2 + 7x - 4 = 0$ (3 pts) 35._____

Simplify the expression.

36. $\sqrt{50}$ (1 pt.) 36._____

37. $11\sqrt{3} - 6\sqrt{3}$ (1 pt.) 37._____

38. $4\sqrt{6} + 3\sqrt{24}$ (2 pts) 38._____

39. $\sqrt{7} \bullet \sqrt{35}$ (2 pts) 39._____

40. $\sqrt{\frac{121}{x^6}}$ (2 pts) 40._____

41. $\sqrt{32x^{10}}$ (2pts) 41._____