Name _____ Period _____ Date _____

PRACTICE TEST QUESTIONS for Factoring Assessment (v2A)

Write the letter for the correct answer in the blank at the right of each question.

1. Find the prime factorization of -116.
A. $-1 \cdot 2^2 \cdot 3^3$ **B.** $-4 \cdot 27$ **C.** $-1 \cdot 2^2 \cdot 29$ **D.** $-1 \cdot 2^4 \cdot 7$ **1.** _____

2. Factor $76u^3v^2$ completely.
A. $76 \cdot u \cdot u \cdot u \cdot v \cdot v$ **B.** $2 \cdot 19 \cdot u \cdot v$
C. $4 \cdot 19 \cdot u^3 \cdot v^2$ **D.** $2 \cdot 2 \cdot 19 \cdot u \cdot u \cdot u \cdot v \cdot v$ **2.** _____

3. Find the GCF of $45xy^2$ and $-60y$.
A. $5y^2$ **B.** $15y$ **C.** $180xy^2$ **D.** $30xy$ **3.** _____

4. Factor $24x^2y - 66xy^2 + 54x^2y^2$ completely.
A. $2xy(12x - 33y + 27xy)$ **B.** $6x^2y^2(4y - 11x + 9)$
C. $(4x^2 + 6y)(6x - 9y^2)$ **D.** $6xy(4x - 11y + 9xy)$ **4.** _____

Solve each equation.

5. $4x^2 - 16x = 0$
A. $\{4, -4\}$ **B.** $\{0, 2, -2\}$ **C.** $\{0, 4\}$ **D.** $\{16\}$ **5.** _____

6. $(3w + 4)(2w - 7) = 0$
A. $\left\{-\frac{3}{4}, \frac{2}{7}\right\}$ **B.** $\left\{\frac{3}{4}, -\frac{2}{7}\right\}$ **C.** $\left\{-\frac{4}{3}, \frac{7}{2}\right\}$ **D.** $\left\{\frac{4}{3}, -\frac{7}{2}\right\}$ **6.** _____

For Questions 7 and 8, factor each trinomial.

7. $x^2 - 10x + 9$
A. $(x - 1)(x - 9)$ **B.** $(x + 1)(x + 9)$
C. $(x - 1)(x + 9)$ **D.** $(x + 1)(x - 9)$ **7.** _____

8. $n^2 - 12n - 45$
A. $(n - 5)(n + 9)$ **B.** $(n - 3)(n + 15)$
C. $(n - 9)(n + 5)$ **D.** $(n + 3)(n - 15)$ **8.** _____

9. Solve $y^2 = 13y - 42$.
A. $\{-6, -7\}$ **B.** $\{6, 7\}$ **C.** $\{-6, 7\}$ **D.** $\{6, -7\}$ **9.** _____

10. Which binomial is a factor of $14a^2 - 15a + 4$?
A. $7a + 2$ **B.** $14a - 1$ **C.** $7a - 1$ **D.** $7a - 4$ **10.** _____

11. Factor $5x^2 - 13x + 6$.
A. $(x + 3)(5x - 2)$ **B.** $(x - 2)(5x - 3)$
C. $(x + 2)(5x + 3)$ **D.** $(x - 3)(5x + 2)$ **11.** _____

12. Solve $7x^2 - 20x = 3$.

A. $\left\{-\frac{1}{7}, 3\right\}$ **B.** $\left\{\frac{1}{7}, -3\right\}$ **C.** $\left\{-\frac{1}{7}, -3\right\}$ **D.** $\left\{\frac{1}{7}, 3\right\}$ **12.** _____

For Questions 13 and 14, factor each polynomial completely, if possible. If the polynomial cannot be factored, choose *prime*.

13. $121r^2 - 64t^2$

A. $(11r + 8t)(11r - 8t)$ **B.** $(11r - 8t)(11r - 8t)$
C. $(11r + 8t)(11r + 8t)$ **D.** prime **13.** _____

14. $3x^5 - 27x^3$

A. $3(x^2 - 3)(x^2 + 3)$ **B.** prime
C. $3x^3(x^2 - 9)$ **D.** $3x^3(x - 3)(x + 3)$ **14.** _____

15. Which trinomial is *not* a perfect square trinomial?

A. $4x^2 + 4x + 1$ **B.** $49x^2 - 56xy + 16y^2$
C. $x^2 + 10x - 25$ **D.** $25 - 30x + 9x^2$ **15.** _____

16. Which binomial is a factor of $6x^2 + 48x + 96$?

A. $x + 4$ **B.** $3x + 8$ **C.** $3x + 16$ **D.** $6x + 16$ **16.** _____

17. Solve $9x^2 = 16$.

A. $\left\{\frac{16}{9}\right\}$ **B.** $\left\{\pm\frac{4}{3}\right\}$ **C.** $\left\{\pm\frac{3}{4}\right\}$ **D.** $\left\{\pm\frac{16}{9}\right\}$ **17.** _____

18. **SOCCER** Julian kicked a soccer ball into the air with an initial upward velocity of 40 feet per second. The height h in feet of the ball above the ground can be modeled by $h = -16t^2 + 40t$, where t is the time in seconds after Julian kicked the ball. Find the time it takes the ball to reach 25 feet above the ground.

A. $2\frac{1}{2}$ s **B.** $\frac{15}{16}$ s **C.** $1\frac{1}{3}$ s **D.** $1\frac{1}{4}$ s **18.** _____

19. The product of two consecutive odd integers is 143. Find their sum.

A. −20 or 20 **B.** −28 or 28 **C.** −26 or 26 **D.** −24 or 24 **19.** _____

20. The length of a rectangle is twice the width. The area is 72 square centimeters. What is the length?

A. 48 cm **B.** 24 cm **C.** 12 cm **D.** 6 cm **20.** _____

Bonus Find the value of c that will make $9x^2 + 30x + c$ a perfect square trinomial. **B:** _____

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Assignment _____

SHOW YOUR WORK IN THE SPACES PROVIDED *(one problem per space and number the problems)*

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