

Name **Answers!**

Date _____ Period ____

DIRECTIONS: For #1-4, answer the questions in the provided blanks.

1. Find the greatest common factor of $25c^4d^5$, $15c^6d^4$, $10c^2d^3$.

$$5c^2d^3$$

2. Find the least common multiple of $25c^4d^5$, $15c^6d^4$, $10c^2d^3$.

$$150c^6d^5$$

3. Find the greatest common factor of $9ab^5c^3$ and $36a^4b^3$.

$$9ab^3$$

4. Find the least common multiple of $9ab^5c^3$ and $36a^4b^3$.

$$36a^4b^5c^3$$

DIRECTIONS: For #5-18, factor completely. Write answers in the provided blanks.

5. $27x^3y^3 + 36xy^5$

$$9xy^3(3x^2 + 4y^2)$$

6. $100m^2 - 9$

$$(10m + 3)(10m - 3)$$

7. $c^2 - 6c + 9$

$(c - 3)^2$

9. $ac - bc + a - b$

$(a - b)(c + 1)$

11. $4x^2 - 20x + 25$

$(2x - 5)^2$

13. $w^2 - 17w + 42$

$(w - 14)(w - 3)$

8. $5p^3 - 5p$

$5p(p + 1)(p - 1)$

10. $m^3 - 8$

$(m - 2)(m^2 + 2m + 4)$

12. $p^6 + q^3$

$(p^2 + q)(p^4 - p^2q + q^2)$

14. $36 + 3x - 3x^2$

$-3(x - 4)(x + 3)$

15. $6c^2 + 7cd - 5d^2$

16. $6a^3 + 13a^2b - 5ab^2$

$(2c - d)(3c + 5d)$

$a(2a + 5b)(3a - b)$

17. $k^4 - 15k^2 - 16$

18. $2y^3 - 14y^2 + 3y - 21$

$(k + 4)(k - 4)(k^2 + 1)$

$(2y^2 + 3)(y - 7)$