

Dividing Polynomials Assignment

Divide the following polynomials by monomials.

1. $24x^2 - 16x^3 + 8x - 16$ by 8

2. $12a^4 - 30a^3 + 18a - 6$ by 6

3. $50x^5 - 7x^4 + x^2$ by x

4. $24x^6 - 32x^4 + 8x^2$ by $-8x^2$

5. $9r^2s^2 + 3r^4s - 6rs^2$ by $-3rs$

6. $4x^4y - 8x^6y^2 + 12x^8y^6$ by $4x^4y$

7. $4x^4 + 8x^3 - 16x^2 + 10x$ by $2x$

8. $5b^4 - 10b^3 - 15b^2 + 10b$ by $5b$

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Divide the polynomials by binomials.

9. $x^2 + 10x + 21$ by $x + 7$

10. $2a^2 - 3a - 6$ by $a + 2$

11. $2a^3 - 11a^2 - 6a - 5$ by $a - 6$

12. $a^3 - 6a^2 + 12a - 8$ by $a - 2$

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13. $12x^3 - 11x^2 + 8x - 4$ by $3x - 2$

14. $2c^3 - 9c^2 - 7c - 1$ by $2c - 3$

15. $y^2 - y - 110$ by $y + 10$

16. $8d^2 + 3d + 4$ by $d - 3$

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Dividing Polynomials Assignment

Divide the following polynomials using synthetic division.

17. $3x^3 - x^2 - 8x + 5$ by $x + 2$

18. $x^3 - x - 2$ by $x - 3$

19. $a^4 + 16$ by $a + 2$

20. $4x^5 - 3x + 122$ by $x + 2$