

Dividing Polynomials

Simplify.

1. $\frac{10c + 6}{2}$

2. $\frac{12x + 20}{4}$

3. $\frac{15y^3 + 6y^2 + 3y}{3y}$

4. $\frac{12x^2 - 4x - 8}{4x}$

5. $(15q^6 + 5q^2)(5q^4)^{-1}$

6. $(4f^5 - 6f^4 + 12f^3 - 8f^2)(4f^2)^{-1}$

7. $(6j^2k - 9jk^2) \div 3jk$

8. $(4a^2h^2 - 8a^3h + 3a^4) \div (2a^2)$

9. $(n^2 + 7n + 10) \div (n + 5)$

10. $(d^2 + 4d + 3) \div (d + 1)$

11. $(2s^2 + 13s + 15) \div (s + 5)$

12. $(6y^2 + y - 2)(2y - 1)^{-1}$

13. $(4g^2 - 9) \div (2g + 3)$

14. $(2x^2 - 5x - 4) \div (x - 3)$

15. $\frac{u^2 + 5u - 12}{u - 3}$

16. $\frac{2x^2 - 5x - 4}{x - 3}$

17. $(3v^2 - 7v - 10)(v - 4)^{-1}$

18. $(3t^4 + 4t^3 - 32t^2 - 5t - 20)(t + 4)^{-1}$

19. $\frac{y^3 - y^2 - 6}{y + 2}$

20. $\frac{2x^3 - x^2 - 19x + 15}{x - 3}$

21. $(4p^3 - 3p^2 + 2p) \div (p - 1)$

22. $(3c^4 + 6c^3 - 2c + 4)(c + 2)^{-1}$

23. **GEOMETRY** The area of a rectangle is $x^3 + 8x^2 + 13x - 12$ square units. The width of the rectangle is $x + 4$ units. What is the length of the rectangle?