

NAME _____

Module 12 Factoring Using Several Methods
Lesson 6 Dividing Polynomials by Monomials



**additional
practice**

Factor completely.

1. $2a^3 - 18a$

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

3. $18c^3 - 50c$

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

5. $4e^3 + 20e^2 + 24e$

$4e(e + 3)(e + 2)$

7. $4g^3 - 32g^2 + 48g$

$4g(g - 2)(g - 6)$

9. $27h^2 + 63h + 30$

$3(3h + 2)(3h + 5)$

11. $8n^3 + 4n^2 - 12n$

$4n(2n + 3)(n - 1)$

13. $r^3 + 5r^2 - 9r - 45$

$(r + 3)(r - 3)(r + 5)$

15. $6t^7 - 40t^5 - 126t^3$

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

17. $x^2y - 3x^2 - 25y + 75$

$(x + 5)(x - 5)(y - 3)$

19. $-2p^2q^2 + 6pq^2 + 8p^2 - 24p$

$-2p(q + 2)(q - 2)(p - 3)$

2. $b^5 - 64b^3$

$b^3(b - 8)(b + 8)$

4. $-5d^3 + 405d$

$-5d(d - 9)(d + 9)$

6. $3f^3 + 3f^2 - 36f$

$3f(f + 4)(f - 3)$

8. $2k^2j + 10kj - 48j$

$2j(k + 8)(k - 3)$

10. $12m^3 + 10m^2 - 8m$

$2m(2m - 1)(3m + 4)$

12. $18p^3q - 30p^2q - 72pq$

$6pq(p - 3)(3p + 4)$

14. $s^5 - 16s$

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

16. $16w^{10} - 36w^8 + 36w^6 - 81w^4$

$w^4(4w^4 + 9)(2w + 3)(2w - 3)$

18. $2m^2n^2 + 12mn^2 - 18m^2 - 108m$

$2m(n + 3)(n - 3)(m + 6)$

20. $3a^3b^2 - 12a^3 + 27ab^2 - 108a$

$3a(a^2 + 9)(b + 2)(b - 2)$

