

12.6 p.884 #10-24, 29,30,57-59

15. $q^2 - 121$
 $(q + 11)(q - 11)$

18. $w^4 - 625$
 $(w^2 + 25)(w + 5)(w - 5)$

21. $h^3 - 100h$
 $h(h + 10)(h - 10)$

24. $x^2 - 4y^2$
 $(x + 2y)(x - 2y)$

16. $r^4 - k^4$
 $(r^2 + k^2)(r + k)(r - k)$

19. $r^2 - 9t^2$
 $(r + 3t)(r - 3t)$

22. $h^4 - 256$
 $(h^2 + 16)(h + 4)(h - 4)$

25. $7h^4 - 7p^4$

17. $6n^4 - 6$
 $6(n^2 + 1)(n + 1)(n - 1)$

20. $2c^2 - 32d^2$

$2(c + 4d)(c - 4d)$
 23. $2x^3 - x^2 - 162x + 81$
 $(x + 9)(x - 9)(2x - 1)$

26. $3c^3 + 2c^2 - 147c - 98$

29. $f^3 + 2f^2 - 64f - 128$

30. $3r^3 - 192r$

29. $(f + 8)(f - 8)(f + 2)$

30. $3r(r + 8)(r - 8)$

57. **ERROR ANALYSIS** Elizabeth and Lorenzo are factoring an expression. Is either of them correct? Explain your reasoning.

<p><i>Elizabeth</i></p> $16x^4 - 25y^2 =$ $(4x - 5y)(4x + 5y)$
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<p><i>Lorenzo</i></p> $16x^4 - 25y^2 =$ $(4x^2 - 5y)(4x^2 + 5y)$
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57. Lorenzo; sample answer: Checking Elizabeth's answer gives us $16x^2 - 25y^2$. The exponent on x in the final product should be 4.

8.9 Pg 527 #23-33odd, 81,83

22. $8c^2 - 88c + 242$ $2(2c - 11)^2$

24. $w^4 - w^2$ $w^2(w - 1)(w + 1)$

26. $16q^3 - 48q^2 + 36q$ $4q(2q - 3)^2$

28. $x^3 + 2x^2y - 4x - 8y$

30. $2r^3 - r^2 - 72r + 36$

32. $4c^4d - 10c^3d + 4c^2d^3 - 10cd^3$

23. $12x^2 - 84x + 147$ $3(2x - 7)^2$

25. $12p^3 - 3p$ $3p(2p + 1)(2p - 1)$

27. $4t^3 + 10t^2 - 84t$ $2t(t + 6)(2t - 7)$

29. $2a^2b^2 - 2a^2 - 2ab^3 + 2ab$
 $2a(a - b)(b + 1)(b - 1)$

31. $3k^3 - 24k^2 + 48k$ $3k(k - 4)(k - 4)$

33. $g^2 + 2g - 3h^2 + 4h$ **prime**

Find the slope of the line that passes through each pair of points.

80. $(5, 7), (-2, -3)$ $\frac{10}{7}$

81. $(2, -1), (5, -3)$ $-\frac{2}{3}$

83. $(-3, -4), (5, -1)$ $\frac{3}{8}$

84. $(-2, 3), (8, 3)$ **0**