Name: _____ Date: _____ Period: _____

Chapter 8 Test REVIEW

Short Answer

Find the GCF of each set of monomials.

1. $9x^2y^3$, $6xy^3$
2. $5ab$, $6ac$, $7bc$
3. $276n^6y^2t$, $348n^3t^4$
4. $132x^3y^2$, $126x^2z^3$, $15xyz^2$
5. $12x^3y^2$, $44xy^3$
6. $2ab$, $5bc$, $9ac$

Factor each polynomial.

7. $3xy - 4x + 6y - 8$
8. $t^2 - 11t + 24$
9. $n^2 + n - 42$
10. $10y^2 - 31y + 15$
11. $36m^2 - 49$
12. $25w^2 - 60w + 36$
13. $2xy - 4x + 3y - 6$
14. $m^2 + 12m - 28$
15. $r^2 - r - 56$
16. $5t^2 + 17t - 12$
17. $49a^2 - 169$
18. $81c^2 + 72c + 16$
19. $10x^2 + 29x - 21$

Factor each polynomial, if possible. Hint: For these problems, you have to find the GCF first... Then factor what's left! Take out the common factor and put what's left in parenthesis!

20. $6p^2 - 20p + 16$
21. $3x^5 - 75x^3$
22. $-x^2 + 5x + 24$
23. $-18x + 2x^2 - 72$
24. $3x^3 - 24x^2y + 48xy^2$

Solve each equation. Factor, then make each (parenthesis) equal to zero and solve for the variable.

25. $(3n + 2)(n - 2) = 0$
26. $16y^2 - 8y = 0$
27. $x^2 = x + 110$
28. $36x^2 + 49 = 84x$
29. $49w^2 - 25 = 0$
30. $(x + 5)(4x - 3) = 0$
31. $y^2 + 4y = 45$
32. $9n^2 + 6n = 3$
33. $25x^2 + 81 = 90x$
34. $64x^2 - 1 = 0$
35. $x^2 + 14x - 32 = 0$

Chapter 8 Test REVIEW
Answer Section

SHORT ANSWER

1. $3xy^3$
2. 1
3. $12n^3t$
4. $3x$
5. $4xy^2$
6. 1
7. $(3y – 4)(x + 2)$
8. $(t – 8)(t – 3)$
9. $(n + 7)(n – 6)$
10. $(5y – 3)(2y – 5)$
11. $(6m + 7)(6m – 7)$
12. $(5w – 6)^2$
13. $(y – 2)(2x + 3)$
14. $(m + 14)(m – 2)$
15. $(r – 8)(r + 7)$
16. $(5t – 3)(t + 4)$
17. $(7a + 13)(7a – 13)$
18. $(9c + 4)^2$
19. $(5x – 3)(2x + 7)$
20. $2(3p – 4)(p – 2)$
21. $3x^3(x + 5)(x – 5)$
22. $–1(x – 8)(x + 3)$
23. $2(x – 12)(x + 3)$
24. $3x(x – 4y)^2$
25. $\left\{-\frac{2}{3}, 2\right\}$
26. $\left\{0, \frac{1}{2}\right\}$
27. {–10, 11}
28. $\left\{\frac{7}{6}\right\}$
29. $\left\{-\frac{5}{7}, \frac{5}{7}\right\}$
30. $\left\{–5, \frac{3}{4}\right\}$
31. {–9, 5}

32. $\left\{-1, \frac{1}{3}\right\}$
33. $\left\{\frac{9}{5}\right\}$
34. $\left\{-\frac{1}{8}, \frac{1}{8}\right\}$
35. {–16, 2}