

Algebra 1 skills you should know before starting **Algebra 2** Name: _____

Leave fractional answers but reduce if possible. Do NOT give decimal answers unless there is a decimal in the question. Show ALL WORK on a SEPARATE SHEET and attach to the back.

NO WORK = NO CREDIT!!!!!!!

Due on the FIRST day of school. = First Daily Grade

Answers

SOLVE

- | | | |
|---------------------------------------|---|--|
| 1. $3x - 5 = 22$ | 2. $5x + 3 = 7x - 8$ | 3. $\frac{y}{5} - 10 = 20$ |
| 4. $2(3x - 1) = 4x + 8$ | 5. $\frac{2w + w - 4}{3} = \frac{2}{5}$ | 6. $\frac{2}{3}t = 12$ |
| 7. $3z - 6 > 5z + 12$ | 8. $13 < \frac{1}{2}(y - 5)$ | 9. $\frac{x}{2} + \frac{x}{4} = \frac{3}{8}$ |
| 10. $14 - 3(2w + 5) \leq 5 - (3 - w)$ | 11. Solve for y | $3x + 2y = 8$ |

FACTOR

- | | | |
|---------------------|------------------------|---------------------|
| 12. $x^2 + 5x + 6$ | 13. $x^2 - 5x + 6$ | 14. $x^2 + 5x - 6$ |
| 15. $x^2 - 5x + 6$ | 16. $y^2 - 9$ | 17. $3x^2 + 7x + 4$ |
| 18. $5x^2 + 7x - 6$ | 19. $12w^2 - 28w + 15$ | 20. $16y^2 - 25$ |

SIMPLIFY

- | | | |
|---------------------------------|-------------------------------------|-------------------------------------|
| 21. $(2+3)^2 - 4(3-5)$ | 22. $24 \div 2 \cdot 6$ | 23. $24 \div (2 \cdot 6)$ |
| 24. $(-5)^2$ | 25. -5^2 | 26. 7^1 |
| 27. 7^0 | 28. $\sqrt{64}$ | 29. 3^{-2} |
| 30. $ 3 - 8 $ | 31. $2 - 5 4 + 6 $ | 32. $\left(\frac{2}{3}\right)^{-2}$ |
| 33. $\frac{1}{2} + \frac{2}{3}$ | 34. $\frac{1}{2} \cdot \frac{2}{3}$ | 35. $\frac{1}{2} \div \frac{2}{3}$ |

EVALUATE if $a = -2$, $b = 3$, $c = -1$

- | | | |
|--------------|---------------|-----------------|
| 36. $ab - c$ | 37. $5a + 2b$ | 38. $(b - c)^a$ |
| 36. _____ | 37. _____ | 38. _____ |

- | | | |
|-----------|-----------|-----------|
| 33. _____ | 34. _____ | 35. _____ |
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36. To which family of functions do the following belong? A. _____ B. _____
 A. $y = 3x^2 - 1$ B. $2x + 3y = 5$ C. $y = |2x + 3|$ C. _____

37. If $f(x) = x^3 - 2x^2 + 3$ find the range if the domain is $\{-3, -1, 0, 2\}$ _____

Solve for the given variable.

38. $3r + 4 = s ; r$ 39. $ax + by = c ; y$ 38. _____ 39. _____

40. $\frac{m}{r} = \frac{p}{x} ; p$ 41. $V = LWH ; W$ 40. _____ 41. _____

42. Find the slope of the line parallel to $3x + 4y = 12$ 42. _____

43. Find the slope of the line perpendicular to $4x - 2y = 9$ 43. _____

44. Solve $y = 3x - 6$
 $y = -x + 2$

45. Solve $x + y = 4$
 $2x + 2y = 8$

46. Solve $2x + y = 3$
 $x - 2y = 4$

47. Solve $x^2 - 4 = 0$

48. Solve $x^2 - x - 6 = 0$

47. Solve $3x^2 + 2x - 1 = 0$

SIMPLIFY Write your answers with **POSITIVE** exponents.

48. $\frac{m^2 n^{10} p}{m^3 n^5 p^3}$

49. $\frac{p^3 q^4 r}{p^3 q^6 r^2}$

50. $(-4x^3 y)^2$

51. $(5x)^2 + 5x^2$

52. $\frac{\sqrt{32}}{\sqrt{2}}$

53. $\sqrt{12} + \sqrt{24} - \sqrt{36}$

54. $2x(3x + 5) + 4(3x + 5)$

55. $(3a^3 + 2a^2 - 5) - (a^3 + a^2 + 2)$

56. $(-w + 3)(w + 3)$

57. $(3m + 2)(m - 4)$

58. $(2x + 5)^2$

59. $(3y - 7)^2$

60. $(2t^2 - 6t + 3)(2t - 5)$