

B 1. $3a - 5 - 5a + 3$
 $-2a - 2$

2. $(\frac{5}{2k})^3 = \frac{5^3}{2^3 k^3} = \frac{125}{8k^3}$

B 3. $3 + 15 \div 5 - 10$
 $3 + 3 - 10$
 $6 - 10$
 -4

B 4. $(3a^3b)(15ab^5)$
 $45a^4b^6$

D 5. $x - \frac{3}{8}x = 5$
 $\frac{5}{8}x = 5 \cdot \frac{8}{5}$
 $x = 8$

D 6. $(3x + 2y)^2$
 $9x^2 + 12xy + 4y^2$

A 7. $\sqrt{15}\sqrt{15} = \sqrt{15}\sqrt{15}\sqrt{3} = 5\sqrt{3}$

B 8. $(x-5)(3x+4) = 0$
 $5, -\frac{4}{3}$

C 9. $x + y = 2$
 $x - y = 6$

 $2x = 8$
 $x = 4$
 $4 + y = 2$
 $y = -2$

A 10. $12 \cdot \frac{x}{100} = 18$
 $12x = 1800$

A 11. $\frac{\sqrt{48} - \sqrt{12}}{4\sqrt{3} - 2\sqrt{3}}$
 $\frac{2\sqrt{3}}{2\sqrt{3}}$

B 12. $32x^2 - 2a^2$
 $2(16x^2 - a^2)$
 $2(4x - a)(4x + a)$

C 13. $x^2 + x - 6$
 $(x + 3)(x - 2)$

A 14. $2x - 3 \geq 4x + 5$
 $-8 \geq 2x$
 $-4 \geq x$

B 15. $y = -2x + 4$ (0, 4)
 $0 = -2x + 4$ (2, 0)
 $2x = 4$
 $x = 2$

D 16. $2x - 3y = 6$
 $-3y = -2x + 6$
 $y = \frac{2}{3}x - 2$

B 17. -2

D 18. $y = \frac{2}{3}x + 5$
 $3y = 2x + 15$
 $-2x + 3y = 15$
 $2x - 3y = -15$

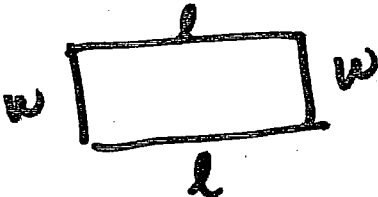
B 19. $\frac{7(3) - 3(-2)}{2(3) + (-2)} = \frac{21 + 6}{6 - 2} = \frac{27}{4}$

C 20. $\frac{3t^2 - 6t}{3t} = \frac{3t(t - 2)}{3t}$


A 21. $(y^2 - 4y + 3) - (4y^2 + 5y - 2)$
 $y^2 - 4y + 3 - 4y^2 - 5y + 2$
 $-3y^2 - 9y + 5$

C 22. $x^2 - x = 12$
 $x^2 - x - 12 = 0$
 $(x+3)(x-4) = 0$
 $-3, 4$

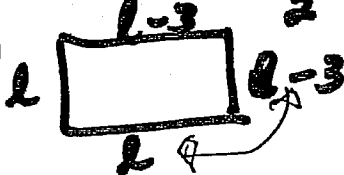
A 23. $ax - b = 0$
 $ax = b$
 $x = \frac{b}{a}$

D 24.  $2l + 2w = 72$
 $l + w = 36$
 ~~$l = 36 - w$~~ $l = 36 - w$

A 25. $\frac{w^2 + 6w + 5}{w + 5} = \frac{(w+5)(w+1)}{w+5}$

A 26. $x = 3$ 

D 27. $\frac{3}{x-1} = 2$ $3 = 2(x-1)$
 $3 = 2x - 2$
 $5 = 2x$
 $\frac{5}{2} = x$

B 28.  $4l - 6 = 94$
 $4l = 100$
 $l = 25$

A 29. $x^2 - 2x = 0$
 $x(x-2) = 0$
 $0, 2$

C 30. $2x^2 + 12x + 18$

D 31. $(-3)^2(-3)^3 - (-3)^5 = -243$

A 32. $(+\frac{18^2}{25}) (+\frac{1}{24}) = \frac{2}{15}$

B 33. $5a^3 - 10a^2 + 15a$
 $5a(a^2 - 2a + 3)$

D 34. $-3x \geq 6$
 $x \leq -2$

C 35. $(7m+2n)^2 = 49m^2 + 28mn + 4n^2$

B 36. $-6^2 = -1(6 \times 6)$

C 37. $5rt + 15r^2t^3$
 $5rt(1 + 3rt^2)$

C 38. $a - 2 = 12$

B 39. $\frac{9a^4b^2}{16} \cdot \frac{16}{a^4b^{12}} = \frac{9}{b^{10}}$

C 40. $5x^2 + 20x + 20$
 $5(x^2 + 4x + 4)$
 $5(x+2)^2$

C 41. $2x^2y^2 + 4xy + 2$
 $2(x^2y^2 + 2xy + 1)$
 $2(xy+1)^2$

C 42.

C 43. $\frac{(\sqrt{3}+2)(\sqrt{3}+2)}{(\sqrt{3}-2)(\sqrt{3}+2)} = \frac{3+4\sqrt{3}+4}{3-4} = \frac{7+4\sqrt{3}}{-1}$


B 44. $\sqrt{50} - 2\sqrt{18}$
 $5\sqrt{2} - 2 \cdot 3\sqrt{2} = 5\sqrt{2} - 6\sqrt{2} = -\sqrt{2}$

A 45. $3x^2 + 7x + 2$
 $(3x + 1)(x + 2)$

B 46. $4(25x^2 + 20x + 4)$
 $4(5x + 2)(5x + 2)$

D 47. $\frac{(-2x)^2}{(-2r)^2} = 4x^2 \frac{(-2r)^3}{(-2r)^2} = 4x^2 (-2r) = -8x^2r$

C 48. $5 + 12N = 113$

A 49. $|x| \leq 3$ 

C 50. $y \leq 3x - 2$ $y \geq \frac{1}{2}x + 1$

