

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

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

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

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

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

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

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

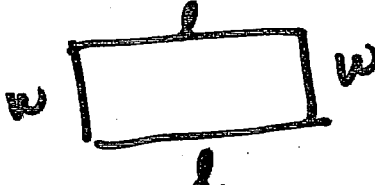
B 19.  $\frac{7(3) - 3(-2)}{2(3) + (-2)} = \frac{21 + 6}{6 - 2} = \frac{27}{4}$

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

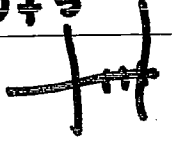
A 21.  $(y^2 - 4y + 3) - (4y^2 + 5y - 2)$   
 $y^2 - 4y + 3 - 4y^2 - 5y + 2$   
 $-3y^2 - 9y + 5$

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

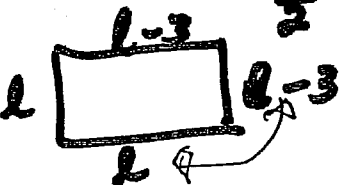
A 23.  $ax - b = 0$   
 $ax = b$   
 $x = \frac{b}{a}$

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.  $(+\frac{18^2}{25})(+\frac{1}{27}) = \frac{2}{15}$

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.  $\frac{(-2x)^2}{(-2r)^3} = 4x^2 (-2r)^3 = 4x^2 (-8r^3) = -32x^2 r^3$

C 48.  $5 + 12N = 113$

A 49.  $|x| \leq 3$  

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

