

① $H(-5, 3)$
 $G(6, -2)$

② $3x + 2y = 6$

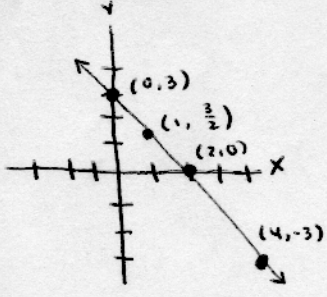
$x=0$
 $3(0) + 2y = 6$
 $2y = 6$
 $y = 3$

$y=0$
 $3x + 2(0) = 6$
 $3x = 6$
 $x = 2$

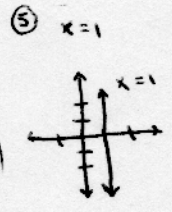
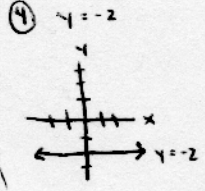
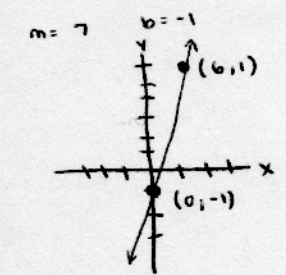
$x=1$
 $3(1) + 2y = 6$
 $3 + 2y = 6$
 $2y = 3$
 $y = \frac{3}{2}$

$y = -3$
 $3x + 2(-3) = 6$
 $3x - 6 = 6$
 $3x = 12$
 $x = 4$

x	y
0	3
2	0
1	$\frac{3}{2}$
4	-3



③ $3y - 21x = -3$
 $3y = 21x - 3$
 $y = 7x - 1$



⑥ $(11, 3)$ $(15, -4)$
 x_1, y_1 x_2, y_2
 $m = \frac{y_2 - y_1}{x_2 - x_1}$
 $m = \frac{-4 - 3}{15 - 11} = \frac{-7}{4}$

⑦ $(3, -4)$ $(3, -9)$
 x_1, y_1 x_2, y_2
 $m = \frac{y_2 - y_1}{x_2 - x_1}$
 $m = \frac{-9 - (-4)}{3 - 3} = \frac{-5}{0}$

$m = \text{undefined}$

⑧ $(-8, 7)$ $(4, 7)$
 x_1, y_1 x_2, y_2
 $m = \frac{y_2 - y_1}{x_2 - x_1}$
 $m = \frac{7 - 7}{4 - (-8)} = \frac{0}{12} = 0$

⑨ $y = -5x - 7$
 $y = mx + b$
 $m = -5$ $b = -7$

⑩ $y = -2.5x + 1.8$
 $y = mx + b$
 $m = -2.5$ $b = 1.8$

⑪ $x + y = -12$
 $-x \quad -x$
 $y = -x - 12$
 $y = mx + b$
 $m = -1$ $b = -12$

⑫ $t^5 \cdot t^7 \cdot t^5$
 $t^{5+7+5} = t^{17}$

⑬ $(-2)^7 (-2)^9$
 $(-2)^{7+9} = (-2)^{16}$

⑭ $(x^6)^5$
 $x^{6 \cdot 5} = x^{30}$

⑮ $(5^5)^8$
 $5^{5 \cdot 8} = 5^{40}$

⑯ $\left(\frac{pm^6}{q^3}\right)^4$
 $\frac{p^4 m^{24}}{q^{12}}$

⑰ $\left(\frac{2x^4 y^4}{z^4}\right)^4$
 $\frac{2^4 x^{16} y^{16}}{z^{16}}$

$\frac{16x^{16} y^{16}}{z^{16}}$

⑱ $5^8 t^5$
 $5^2 t$
 $5^8 \cdot 2 t^{5-1}$
 $5^6 t^4$

⑲ $\frac{36m^{20} n^{10}}{9m^{14} n^5}$
 $4m^{20-14} n^{10-5}$
 $4m^6 n^5$

⑳ $-8y^0$
 $-8 \cdot 1$
 -8

㉑ $(96)^0 = 1$

㉒ $(15pq)^3$
 $125 p^3 q^3$
 $\frac{15^3 p^3 q^3}{125 p^3 q^3}$

$\frac{15^3}{125} = \frac{3375}{125}$
 $\frac{27}{1}$

㉓ $\frac{(x^2)^4}{(6x)^3}$
 $\frac{x^8}{6^3 x^3} = \frac{x^5}{6^3}$
 $\frac{x^5}{216}$

㉔ $9 - x^3 - x^2$ $x = -4$
 $9 - (-4)^3 - (-4)^2$
 $9 - (-64) - (16)$
 $9 + 64 - 16$
 $73 - 16$
 57

㉕ $3 \cdot 7x^3 - 6 \cdot 3x + 11 \cdot 7 + 1 \cdot 6x - x^3 - 8 \cdot 7$
 $1 \cdot 9x^3 - 4 \cdot 5x + 3$

㉖ $(3y^3 + 4y^2 - 3) + (9y^3 + 5y^2 + 3)$
 $3y^3 + 4y^2 - 3 + 9y^3 + 5y^2 + 3$
 $12y^3 + 9y^2$

㉗ $(8n^5 + 8n^4 - 5) - (6n^5 - 4n^4 + 10)$
 $8n^5 + 8n^4 - 5 - 6n^5 + 4n^4 - 10$
 $2n^5 + 12n^4 - 21$

28) $4x(3x-5)$

$12x^2 - 20x$

29) $-5x(-2x^2+5x+8)$

$10x^3 - 25x^2 - 40x$

30) $(y-6)(y-9)$ FOIL

$y^2 - 9y - 6y + 54$

$y^2 - 15y + 54$

31) $(x-2)(x^2+4)$ FOIL

$x^3 + 4x - 2x^2 - 8$

$x^3 - 2x^2 + 4x - 8$

32) $(9z+5)^2$

$(9z+5)(9z+5)$

$81z^2 + 45z + 45z + 25$

$81z^2 + 90z + 25$

33) $(a-3)(a+3)$

$a^2 + 3a - 3a - 9$

$a^2 - 9$

34) $\left(\frac{xy^4}{x^4y}\right)^{-2}$

$\left(\frac{y^3}{x^3}\right)^{-2}$

$\frac{y^{-4}}{x^{-6}}$

$\frac{x^6}{y^4}$

35) $(-2x^4y^{-5})(4x^{-1}y)$

$\left(\frac{-2x^4}{y^5}\right) \cdot \left(\frac{4y}{x}\right)$

$\frac{-8x^4y}{xy^5}$

$\frac{-8x^3}{y^4}$

36) $\frac{5^6 x^{-2} y^4}{5^{-3} x^{-5} y^8}$

$\frac{5^3 x^5 y^4}{5^6 x^2 y^8}$

$\frac{x^3}{5^3 y^4} = \frac{x^3}{125y^4}$

37)

$\frac{590,000}{5.9 \times 10^5}$

38) $\frac{0.000329}{3.29 \times 10^{-4}}$

39) $\frac{8.44 \times 10^4}{84400}$

40) $\frac{.000421 \times 10^{-4}}{.000421}$

41) $\frac{-8x^{10} - 40x^4}{-4x^2}$

$\frac{-8x^6}{-4x^2} - \frac{40x^4}{-4x^2}$

$2x^4 + 10x^4$

42) $\frac{15x^7 - 30x^5}{-5x^7}$

$\frac{15x^7}{-5x^7} - \frac{30x^5}{-5x^7}$

$-3 + \frac{6}{x^2}$

43)

$\frac{-30x^8 - 36x^6 - 30x^4}{-6x^6}$

$\frac{-30x^8}{-6x^6} - \frac{36x^6}{-6x^6} - \frac{30x^4}{-6x^6}$

$5x^2 + 6 + \frac{5}{x^2}$