

**Answers to: Extra Practice - Grade 9 Summative Review**

- See definition sheet from chapter one.  
Partial Variation – the y-intercept is NOT 0. Direct Variation – the y-intercept IS 0.
- A straight line.
- Answers will vary (should be able to recognize a slope and y-intercept) a) Sam works for \$10/h.  
b) Joe charges a service call of \$55 plus \$70/h for labour. c) Textbooks cost \$50 each.
- Answers will vary (graph will NOT be a straight line) a) Bacteria doubles every 3 hours. b) \$1000 is invested at 10% per annum compounded semi-annually for 4 years.
- Slope = \$15, Y-intercept = \$100,  $y = 15x + 100$
- Slope stays the same, y-intercept will increase to \$150.
- $m = 0$       8.  $m$  is undefined

9. a)  $y = 5x - 2$       b)  $y = \frac{-2}{3}x + 4$

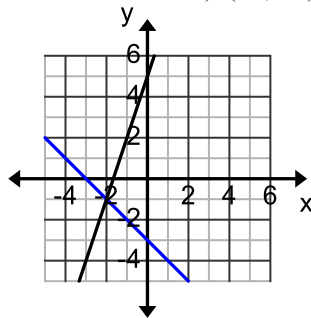
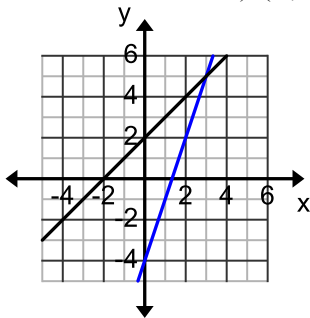
3)  $y = 5x - 1$     d)  $y = -x + 4$     e)  $y = -2x + 5$     f)  $y = -3x + 13$     g)  $y = -3x + 6$     h)  $y = 2x - 17$

i)  $y = \frac{-1}{4}x + 4$     j)  $y = \frac{-1}{3}x + 7$     k)  $y = x - 2$     l)  $x = 4$     m)  $y = 5$     n)  $y = -3$     o)  $x = -2$

- p)  $y = 2$     q)  $x = 1$
10. a)  $\{1,2,3,\dots\}$     b)  $\{0,1,2,\dots\}$     c) all numbers that can be written as fractions (includes negative fractions)
11. a) N    b) W    c) Q (Q is for quotient – a fraction is like a division question and the answer to a division question is the quotient. R is reserved for the set of Reals Numbers.

12. a)  $\frac{1}{4}$     b)  $\frac{-1}{14}$     c)  $\frac{5}{6}$     d)  $\frac{-7}{10}$     e)  $\frac{-1}{8}$
13. a)  $30x^2y^3$     b)  $2x^3y$     c)  $x^{13}$
- d)  $12x^4y^4z$     e)  $x^{12}$     f)  $125x^6$     g)  $36x^8$     h)  $2x$     i)  $1$     j)  $4x^3$     k)  $x^4$     l)  $2xz^7$     m)  $-3x$
14. a)  $x = 5$     b)  $x = 12$  cm
15. a)  $4$     b)  $3x^2$  and  $-2x$     c)  $-2$
16. Answers will vary. a) (one unlike term) e.g.  $14x$     b) (two unlike terms) e.g.  $8x^2 + 14x$     c) (three unlike terms) e.g.  $8x^2 + 14x + 5$
17. a)  $-x^3 + 13x^2 + 2x - 9$     b)  $-4x^2y + 5xy - xy^2$     c)  $8x + 3y + 9$     d)  $12x - 8y - 17$     e)  $-6xy + x + 5$
- f)  $7x - 1$     g)  $6x + 2$     h)  $9xy - 12x + 9$     i)  $8x^2 - 14x$     j)  $x^2 - x + y - 6$     k)  $-13x - 6y$
- l)  $3x^2 + 8x + 42$
18. a)  $x = 3$     b)  $x = -1$     c)  $x = 2$     d)  $x = 11$
- e)  $x = -4$     f)  $x = \frac{-5}{2}$     g)  $x = -3$

19. x-intercept is 4, y-intercept is 6.      20.  $2x - 3y - 12 = 0$
21. a)  $(3, 5)$       b)  $(-2, -1)$



23.  $180^\circ$     24.  $360^\circ$     25.  $360^\circ$     26.  $720^\circ$     27.  $45^\circ$