Thurs Apr 23/20

Math Practice Problems → Week 2 solutions

1a) Not a quadratic → The graph is linear

b) Not a quadratic → The lines extend on constant values of $x = 4$ and $x = -4$ rather than grow outwards

c) Not a quadratic → Not in the shape of a parabola

d) Yes, quadratic → Parabolic shape, symetrical about the axis of symmetry

e) Not a quadratic → No parabolic shape

f) Not a quadratic → Crosses x axis 3 times. Quadratics have a max of 2 x-intercepts.

2a) Not Quadratic → highest degree is 1

b) Quadratic → $2x(x+3) = 2x^2 + 6x$ Degree is 2

c) Quadratic → expand $(x+4)^2$ to see degree of 2

d) Quadratic → degree is 2

e) Not quadratic → highest degree is 3

f) Not quadratic → expand to see highest degree is 3

3a) -7
b) 0
c) 17
d) -6
e) 0
F) -7

(4) $a \neq 0$ is a must, because if there is a zero as the x^2 constant, it eliminates that term and therefore the quadratic nature of the function

5a) Up → "a" is (+)

b) down → "a" is -2 (negative constant)

c) Up → "a" term is +3 ∴ positive

d) down → "a" is negative $(-\frac{2}{3})$

6 a) Up - has a lowest point (-4)

b) Down - has a high point (5)

c) up - has a low point (-5.0)

d) up - points grow exponentially