Math 20-1

KEY

L43 – FQ – 7.2 Absolute Value Functions

Q1: Evaluate each of the following: *(1/2 mark each; 2 marks total)*

$|-3^2|$

$|-9|$

$\boxed{9}$

$|2-8|-10$

$|-6|-10$

$6-10$

$\boxed{-4}$

$2|5-3^2|+2$

$2|5-9|+2$

$2|-4|+2$

$2(4)+2$

$8+2$

$\boxed{10}$

$(2-|7-3|)^3$

$(2-|4|)^3$

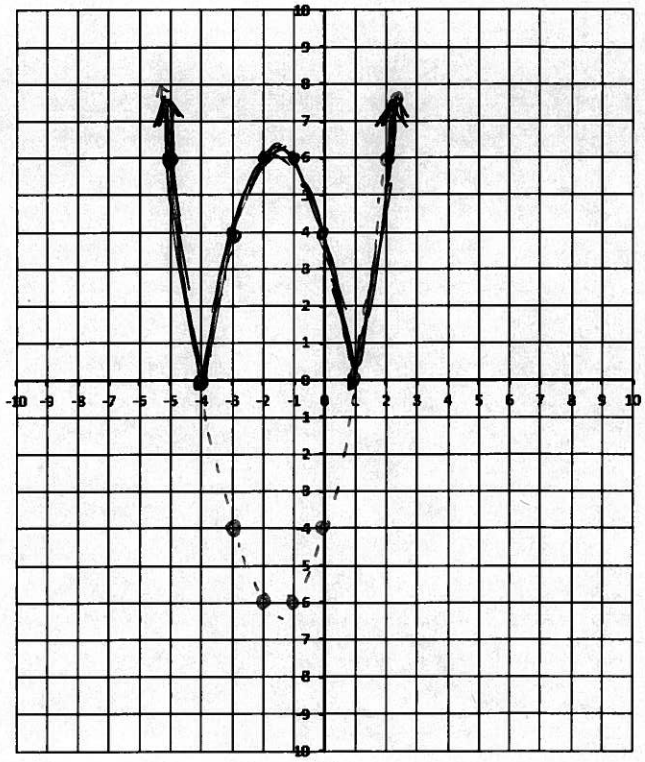
$(2-4)^3$

$(-2)^3$

$\boxed{-8}$

Q2: Sketch the function *(1 mark)*

$f(x) = |x^2 + 3x - 4|$

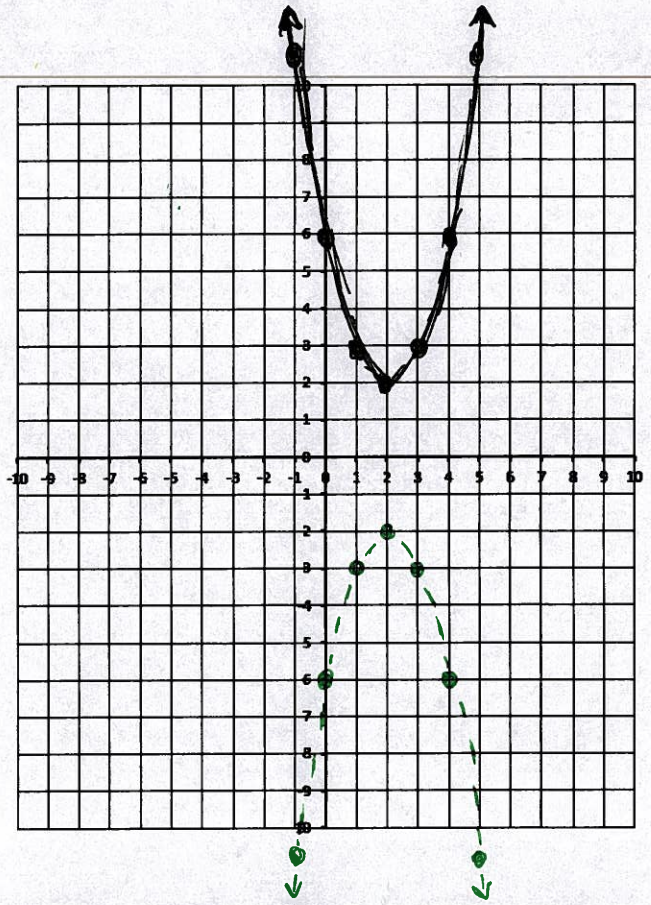


Math 20-1

Key

Q3: Sketch the function *(1 mark)*

$f(x) = |-x^2 + 4x - 6|$



Q4: Write the piecewise function for the graph represented. *(2 marks)*

$y = a(x-h)^2 + k$

$y = a(x-2)^2 + 8$ Use (0,6)

$6 = a(0-2)^2 + 8$

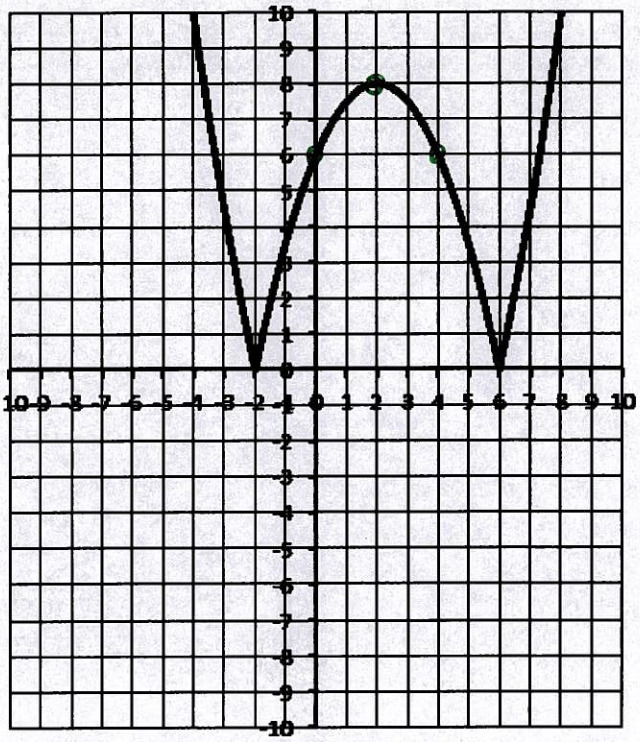
$-2 = a(4)$

$-\frac{1}{2} = a$

So $y = -\frac{1}{2}(x-2)^2 + 8$

Other one is $y = -\left[-\frac{1}{2}(x-2)^2 + 8\right]$

$y = \frac{1}{2}(x-2)^2 - 8$



So $y = \frac{1}{2}(x-2)^2 - 8$ for $x \leq -2$

$y = -\frac{1}{2}(x-2)^2 + 8$ for $-2 < x < 6$

$y = \frac{1}{2}(x-2)^2 - 8$ for $x \geq 6$

MARKING:

Beginning	0.0 – 2.5
Progressing	3.0 – 4.0
Competent	4.5 – 5.5
Exemplary	6.0