

ASSIGNMENT 1

FRI 22 FEB 2019

page 140. Exer 6

a) $y = (2x+3)(x-4)$

b) $y = (4-3x)(x+3)$
 $4x-9x=-5x$

c) $y = (3x-4)(x-3)$

d) $y = (3-4x)(4-x)$

e) $y = (x+3)(3x-4)$

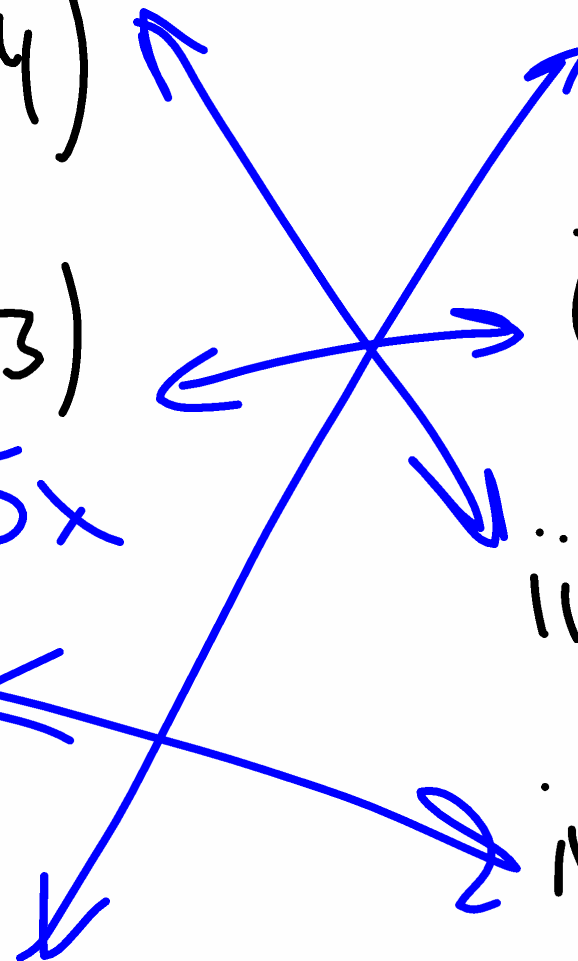
i) $y = 4x^2 - 19x + 12$

ii) $y = -3x^2 - 5x + 12$

iii) $y = 2x^2 - 5x - 12$

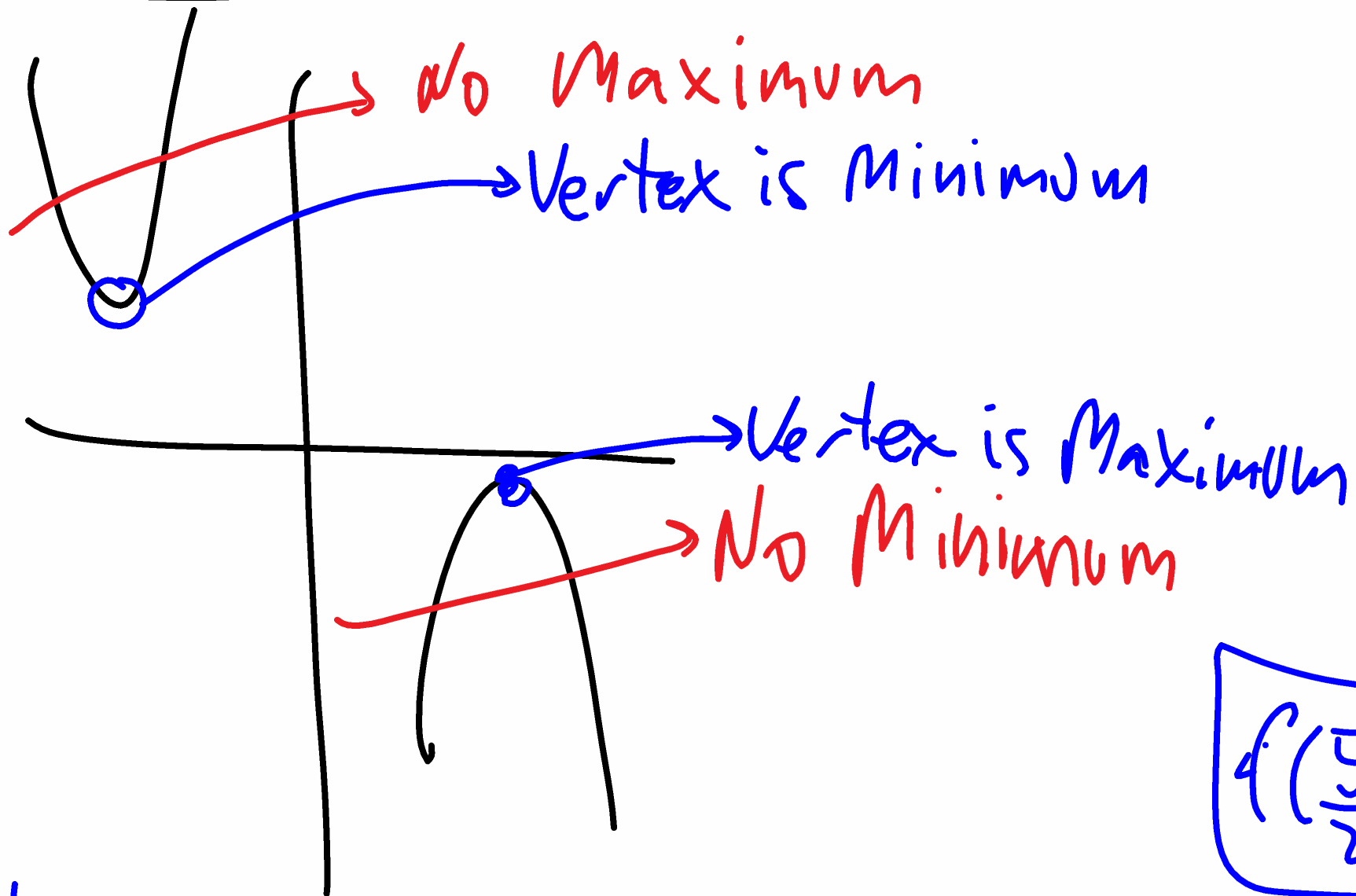
iv) $y = 3x^2 - 13x + 12$

v) $y = 3x^2 + 5x - 12$



Exercise 7 Determine Max & minimum

Reminder



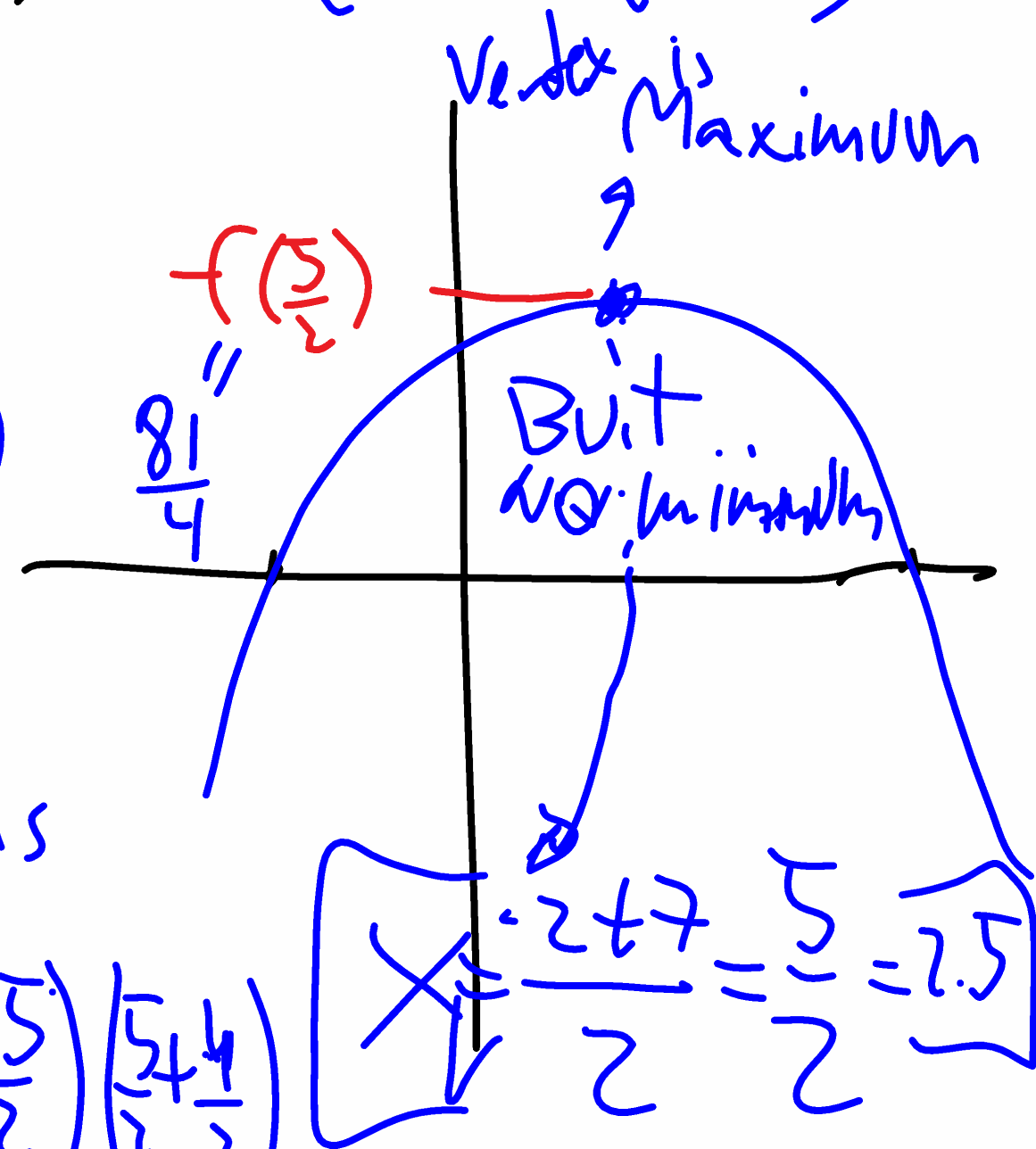
$$a) f(x) = (7-x)(x+2) = -(x-7)(x+2)$$

$$y = f(7) = 0$$

$$y = f(-2) = 0$$

Hence, the
Maximum of f is

$$\begin{aligned} f\left(\frac{5}{2}\right) &= \left(7 - \frac{5}{2}\right)\left(\frac{5}{2} + 2\right) = \left(\frac{14-5}{2}\right)\left(\frac{5+4}{2}\right) \\ &= \frac{9}{2} \cdot \frac{9}{2} = \frac{81}{4} \end{aligned}$$



$$b) f(x) = (x+5)(x-9) = x^2$$

Is it going ↑ or ↓?

Does it cross the x-axis?

Zeros? $x = -5$ $x = 9$

This funct. has no maximum

The minimum is the vertex

$$x = \frac{-5+9}{2} = \frac{4}{2} = 2$$

$$f(2) = 7 \cdot (-7) = -49$$

