

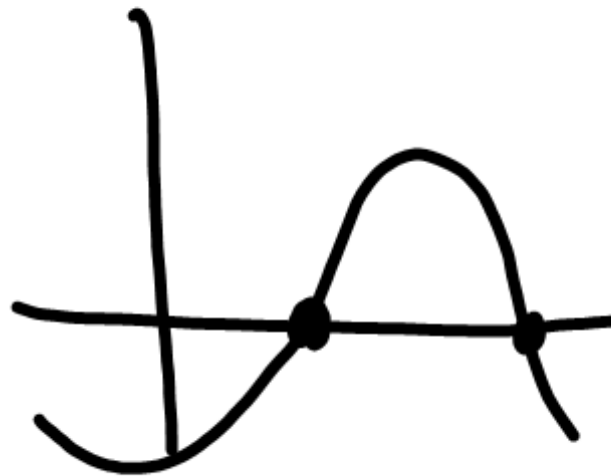
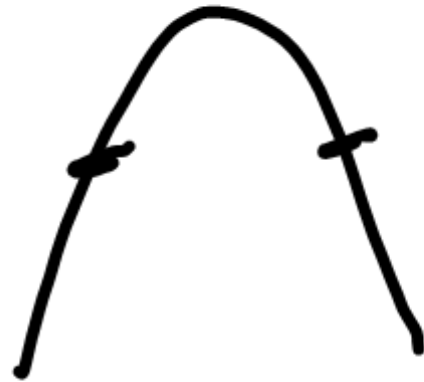
Ex. P181

$$222,000 = -11x^3 + 900x^2 - 50,000$$

$$-222,000$$

$$-222,000$$

$$0 = -11x^3 + 900x^2 - 272,000$$



$$2.6 \quad 51$$

$$P = R - C$$

$$P = x_p - C$$

$$9,000,000 = x(140 - .0001x) - (80x + 150,000)$$

$-9,000,000$ 
 $-9,000,000$

13. p187

 $i\sqrt{5}$ ,  $-i\sqrt{5}$ 

$i\sqrt{5}$	1	$2$ $i\sqrt{5}$	$5$ $2i\sqrt{5}-5$	$10$ $-10$
$-i\sqrt{5}$	1	$2+i\sqrt{5}$ $-i\sqrt{5}$	$2i\sqrt{5}$ $-2i\sqrt{5}$	
	1	2	0	
	$x$	$c$	$R$	

$$x+2 = 0$$

$$x = -2 \quad x = \pm i\sqrt{5}$$

Left : Right hand behavior

Arrows

Degree

Leading coefficient

Equation of quadratic function  
given vertex : point on parabola

p183 5, 6

Find zeros. Rational  $\frac{p}{q}$  Calc  
Synthetic Division Conjugate pairs

Quadratic formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Vertical : Horizontal Asymptotes  
Denominator Division  $\frac{\text{Degree of numerator}}{\text{Degree of denominator}}$

Operations with complex numbers

+ -  $\times$   $\div$

$$i^2 = -1$$

$$\frac{3}{2i} \cdot \frac{2i}{2i}$$

$$\frac{6i}{4i^2}$$

$$-\frac{6i}{4}$$

$$-\frac{3i}{2}$$

p183

5 Vertex  $(-5, -1)$   $(h, k)$ Point  $(-2, 6)$   $(x, y)$ 

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

Substitute  
Solve for  
 $a$ 

$$6 = a(-2 - (-5))^2 + (-1)$$

$$6 = a(3)^2 - 1$$

$$6 + 1 = a(9) - 1 + 1$$

$$\frac{7}{9} = \frac{9a}{9}$$

$$\frac{7}{9} = a$$

Fill in  
 $a$   
 $(h, k)$ 

$$y = \frac{7}{9}(x + 5)^2 - 1$$