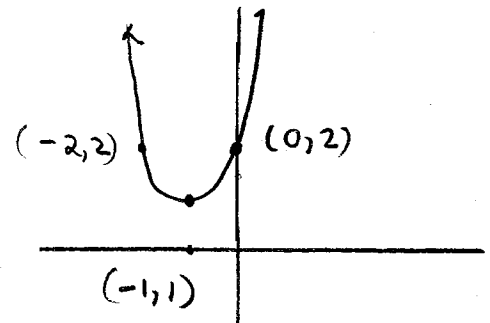
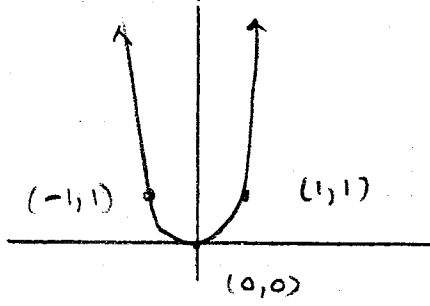
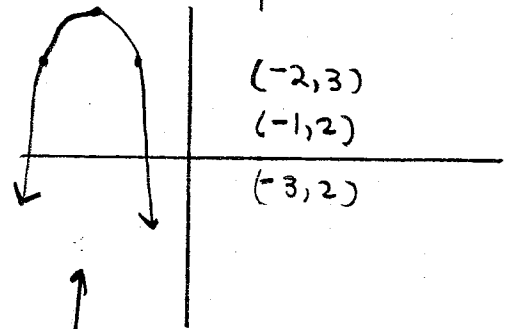
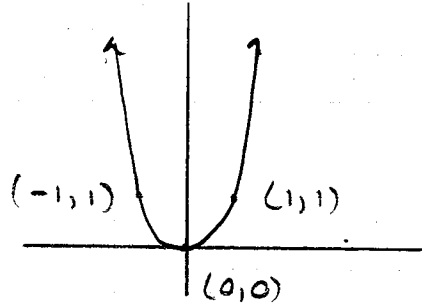


Solutions - Homework - Graphing Polynomial Functions

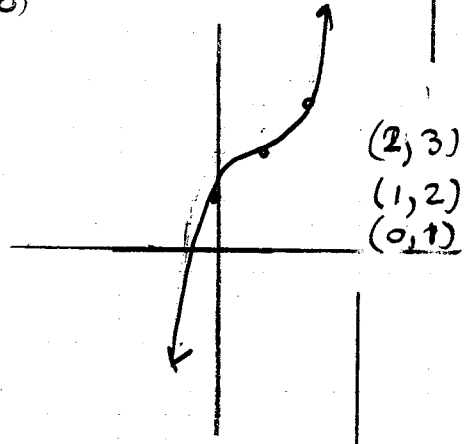
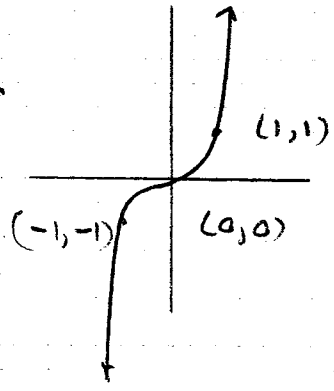
1) $f(x) = (x+1)^4 + 1$
 Shift left 1
 Shift up 1



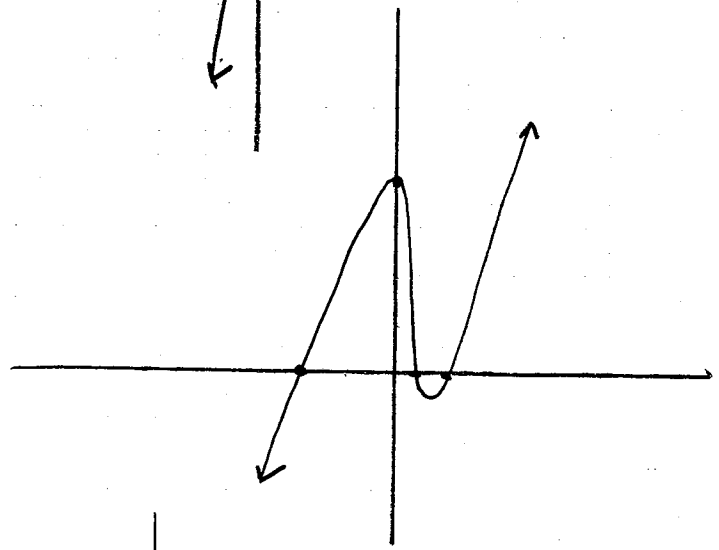
2) $f(x) = 3 - (x+2)^4$
 $f(x) = -(x+2)^4 + 3$
 Shift left 2
 reflect x axis
 shift up 3



3) $f(x) = (x-1)^5 + 2$
 Shift right 1
 Shift up 2

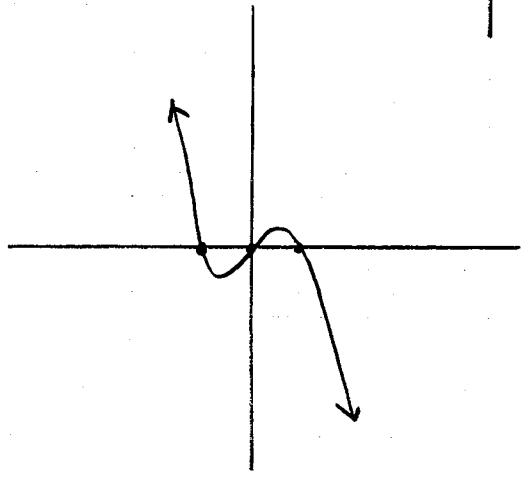


4) $f(x) = (x-1)(x-2)(x+4)$
 Zeros -4 1 2
 mult 1 1 1
 For C C C C
 end behavior $+x^3$
 yint (0,8)



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

Zeros -2 0 2
 mult 1 1 1
 For C C C C
 end beh $-x^3$ yint (0,0)



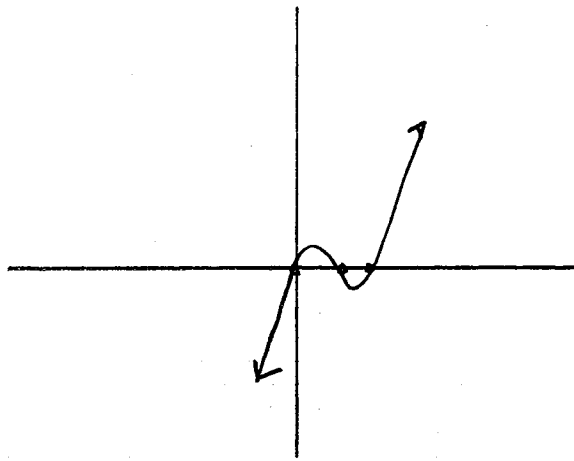
$$6) f(x) = x^3 - 5x^2 + 6x$$

$$f(x) = x(x^2 - 5x + 6)$$

$$f(x) = x(x-2)(x-3)$$

Zeros	0	2	3
mult	1	1	1
Test	C	C	C

end beh $+x^3$ yint (0,0)



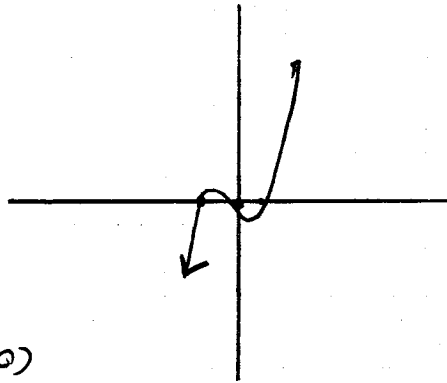
$$7) f(x) = 2x^3 + x^2 - 3x$$

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

$$f(x) = (x)(2x+3)(x-1)$$

zeros	$-\frac{3}{2}$	0	1
mult	1	1	1
Test	C	C	C

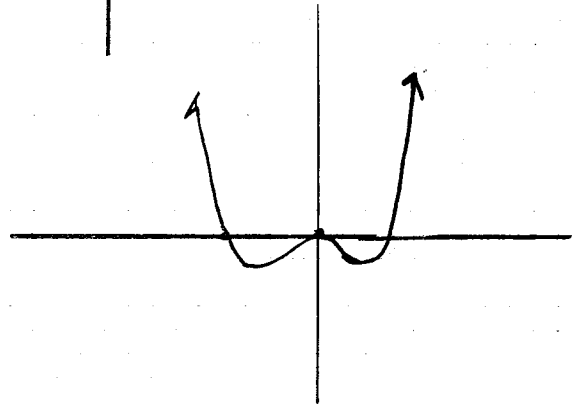
end behavior $+2x^3$ yint (0,0)



$$8) f(x) = x^2(x-3)(x+4)$$

zeros	-4	0	3
mult	1	2	1
Test	C	T	C

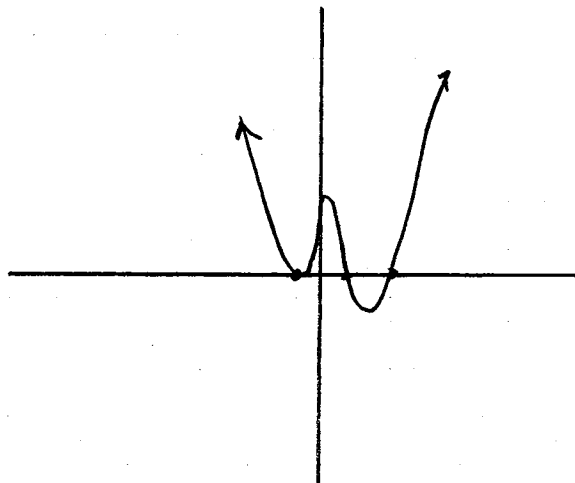
end behavior $+x^4$ yint (0,0)



$$9) f(x) = (x+1)^2(x-3)(x-1)$$

zeros	-1	1	3
mult	2	1	1
Test	T	C	C

end behavior $+x^4$
yint (0,3)



10) $f(x) = x^2(x-2)(x^2+3)$

Zeros 0 2

mult 2 1

T or C T C

end behavior $+x^5$

y int (0,0)

