

HW 8

A2

1. $(2w - 9)(w + 4)$

2. $3z^4 - 12z^2 = 0$

$$3z^2(z^2 - 4) = 0$$

$$3z^2(z+2)(z-2) = 0$$

$$\boxed{z = 0, -2, 2}$$

3. a) 5

b) 3

c) 2

d) $\frac{y}{x}$

	D_1	D_2	D_3
5	}	}	}
-5			
-7	}	}	}
5			
37	}	}	}

degree is 3

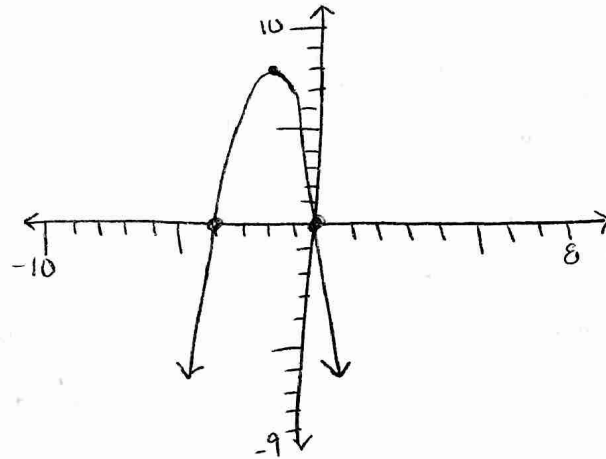
5. $g(x) = -2x(x+4)$

Zeros: 0, -4

Vertex: $\frac{0-4}{2} = (-2, 8)$

$$g(-2) = -2(-2)(-2+4)$$

$$g(-2) = 4(2) = 8$$



4. a) $f(x) = a(x+2)^2 + 4$

pt: (0, 3)

$$3 = a(0+2)^2 + 4$$

$$-1 = 4a$$

$$-1/4 = a$$

$$\boxed{f(x) = -1/4(x+2)^2 + 4}$$

b) $f(x) = -1/4(x^2 + 4x + 4) + 4$

$$f(x) = -1/4x^2 - x - 1 + 4$$

$$\boxed{f(x) = -1/4x^2 - x + 3}$$

c) $\boxed{f(x) = -1/4(x+6)(x-2)}$

d) vertex: (-2, 4)

roots: (-6, 0) & (2, 0)

LDS: $x = -2$