

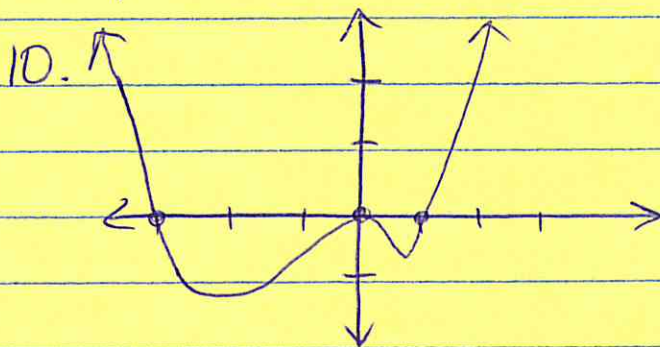
MALG2
Ch6 Pt1
Study Guide 1

1. Quintic 2. Quartic 3. Quadratic

4. Monomial 5. Polynomial 6. Trinomial

7. $-4x^4 + 8x^3 - 5x^2 - 4x$ 8. $y = x^3 - 12x + 16$

9. $x=0$ multiplicity 4
 $x=-4$ multiplicity 3
 $x=-\frac{1}{3}$ multiplicity 2



11. $y = x^3 + 2x^2 - 5x - 6$

Sol'ns: $x = -1, -3, 2$

relative max at $(-2.120, 4.061)$

relative min at $(.786, -8.209)$

12. $V = 4x^3 - 84x^2 + 432x$

$V = x(24 - 2x)(18 - 2x)$

$V = (24x - 2x^2)(18 - 2x)$

$V = 432x - 48x^2 - 36x^2 + 4x^3$

13. a) $y = -.0003x^4 + .019x^3 - .348x^2 + 2.567x$

b) let $x = 53$ (2013-1960) in calculator $(53, -142.713)$

Not a good model. You can't have -142.713% of households

c) According to this model, never. The quartic never reaches 75%.

14. $V = w(w-1)(w+7)$

$V = (w^2 - w)(w+7)$

$V = w^3 + 7w - w^2 - 7w$

$V = w^3 + 6w^2 - 7w$