

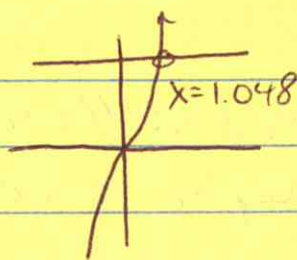
ALG2

Ch 6

Test Review 1 6.1-6.3

$$1. y_1 = 1600x^3 + 1200x^2 + 800x$$

$$y_2 = 4000$$



use intersect key

2ND
TRACE5
ENTER 3X

Interest rate = $x - 1$

rate = $1.048 - 1 = .048$

4.8% interest
rate

$$2. \begin{array}{r} 3x^2 - 7x + 7 \\ x+2 \overline{) 3x^3 - x^2 - 7x + 6} \end{array}$$

$$3x^2(x+2) \quad \underline{-3x^3 + 6x^2}$$

$$-7x^2 - 7x$$

$$-7x(x+2) \quad \underline{-7x^2 - 14x}$$

$$7x + 6$$

$$7(x+2) \quad \underline{-7x + 14}$$

$$-8$$

FF: $3x^2 - 7x + 7 + \frac{-8}{x+2}$

PF: $(x+2)(3x^2 - 7x + 7) - 8$

$$3a) P(3) = 3^3 + 3(3)^2 - 10(3) - 24$$

$$= 27 + 27 - 30 - 24 = 0$$

Yes, $x-3$ is a factor

$$b) P(-6) = (-6)^3 + 3(-6)^2 - 10(-6) - 24$$

$$= -216 + 108 + 60 - 24 = -72$$

No, $x+6$ is not a factor

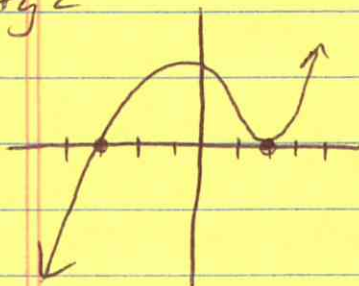
$$2x^3 + 7x - 1$$

4a) cubic b) 2 c) Since lead

coefficient is positive
and n is odd,
the EB is $\swarrow \nearrow$

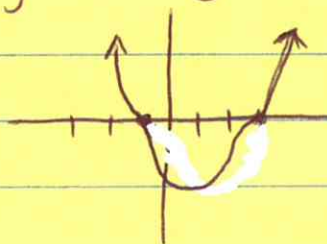
$$5a) x = 2, -3 \quad \text{EB } y = x^3 \swarrow \nearrow$$

multiplicity 2



$$b) x = -1, 3 \quad \text{EB } y = x^4 \nearrow \nearrow$$

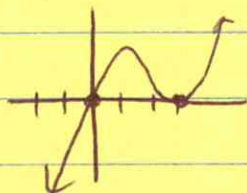
multiplicity 3

(not a perfect,
symmetrical
parabola)

$$6a) y = x(x-3)^2 \quad \text{multiplicity 2}$$

zeros $x = 0, 3$

EB $y = x^3 \swarrow \nearrow$



$$b) y = x^2(x-3)(x+2) \quad \nearrow \nearrow$$

zeros $x = 0, 3, -2$

EB $y = x^4$

multiplicity 2

