Key

Honors Precalculus
Worksheet

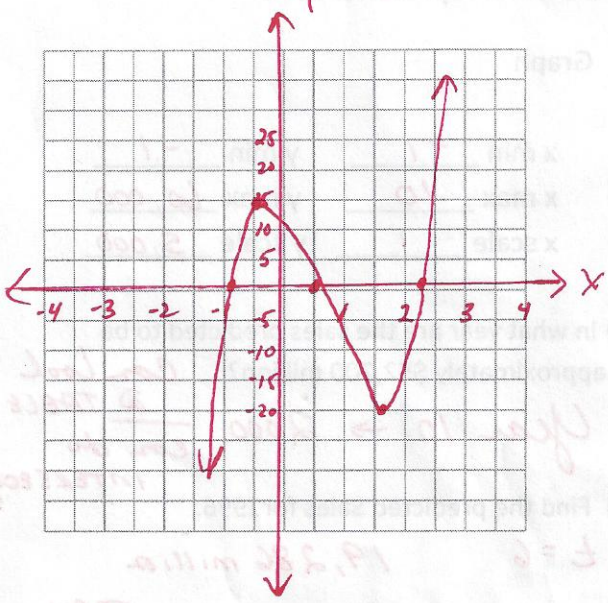
3 Decimal Places

Use your calculator to sketch the following equation.

* Smooth continuous
* end behavior - calculus
* # of zeros.

$$y = 10x^3 - 20x^2 - 14x + 12$$

A) Graph



B) State an appropriate window.

x min -4 y min -25
x max 4 y max 20
x scale 1 y scale 2

C) Find the x – intercept(s)

-0.9234
0.5467
2.3766

D) Find the relative minimum point(s)

(1.6211, -20.6527)

E) Find the relative maximum point(s)

(-0.2878, 14.1342)

F) Find y if x = 1.234

2nd – Calc – VALUE

Y = -16.9403

"IF GIVEN 'X' how do I find Y?"

Explain how you used your calculator.

G) Find x if y = 15.8745

X = 2.5966

"IF GIVEN 'Y' how do I find X?"

Explain how you used your calculator.

Y_2 =

2nd Calc Intersect

t=0 t=10

1) For 1990 through 2000, the predicted sales, S (in millions of dollars), of portable personal computers in the United States can be modeled by

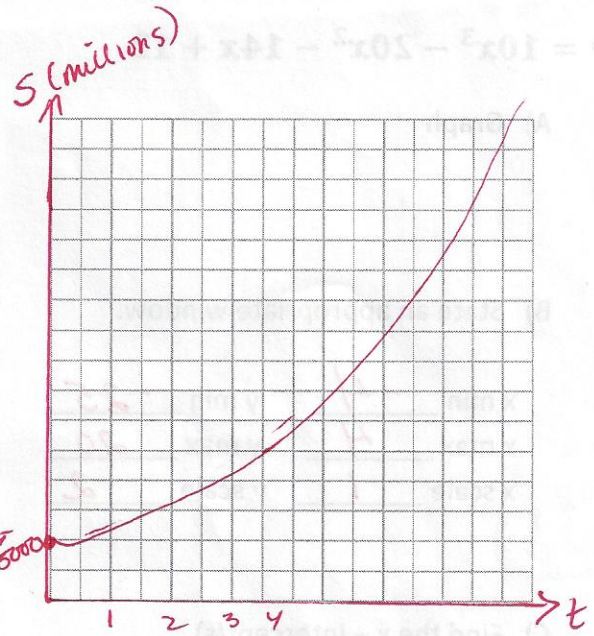
- 4th degree
- End beh.

$$S = -2.6t^4 + 80t^3 - 219t^2 + 1710t + 3000$$

Where $t = 0$ represents 1990

A) Graph

x min -1 y min -1
x max 10 y max 60,000
x scale 1 y scale 5,000



B) In what year are the sales predicted to be approximately \$52,200 million?

Can look @ TABLE or do INTERSECT

Year 10 → 2000

C) Find the predicted Sales for1996.

t = 6 19,286 million

TABLE

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2) In 1991, the United States Department of Defense announced that it was beginning to cut back military and defense-related jobs. The planned cutback was to take place over a five year period. The number of jobs remaining, J (in thousands), can be modeled by

(DOMAIN)

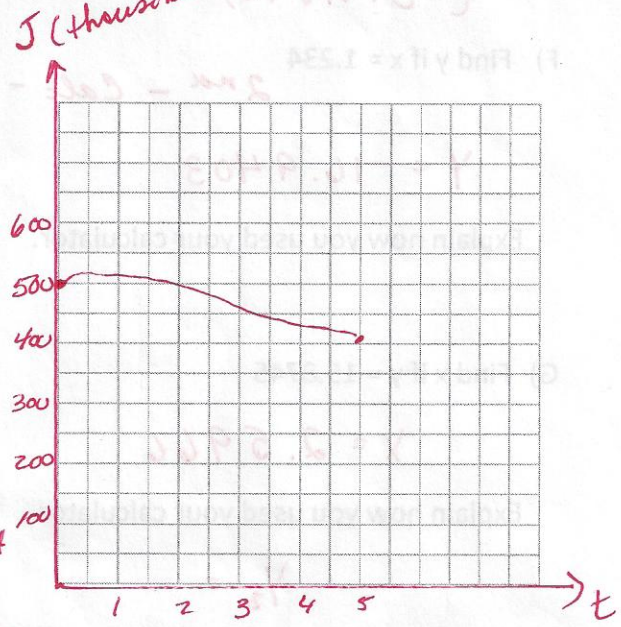
$$J = 12t^3 - 100t^2 + 5100$$

Where $t = 1$ represents 1991

A) Graph

B)

x min -1 y min -1
x max 7 y max 5500
x scale 1 y scale 1000



C) In what year was the number of jobs remaining projected to be 4,100,000?

$Y_2 = 4,100$ Intersect

Yr 5 → 1995

D) Find the number of jobs remaining in 1998.

t = 7

Out of Domain!