UNIT 1 Intro Skills

NAME:_____

REVIEW

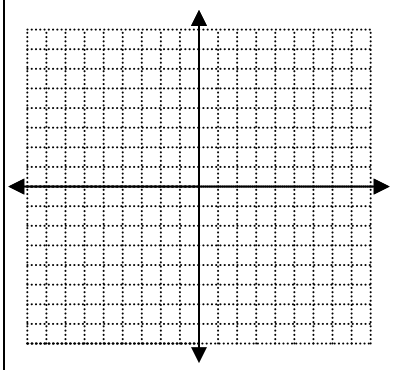
DATE:_____

SKILLZ

1. Fill in the missing representation of the given function.

VERBALLY	ALGEBRAICALLY	NUMERICALLY	GRAPHICALLY
	$y = -\frac{1}{3}x + 6$		

Time (hours)	Sodas (# cans)
2	
6	
-3	
	0



2. Use the functions to answer the following: $f(x) = \frac{3x^2}{2x-1}$ $g(x) = 9 - \frac{2}{3}x$ $h(x) = 4 + 2^{x+3}$

a. $f(-4) =$

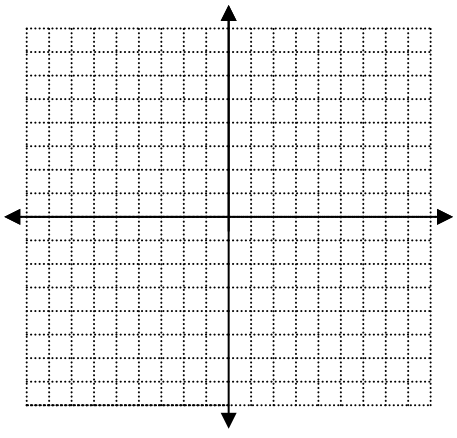
b. $g(x) = 20$ find x

c. $h(5) =$

d. $f(x+2) =$

3. Linear functions

Slope Intercept Form	Standard Form	Point Slope Form
Write the equation of the line in slope intercept form that is perpendicular to $y = 4x + 7$ and contains (-50,10)	Graph $3x - 5y = 20$	Write the equation of the line in point slope form that contains the points (-21,78) and (36,-93)

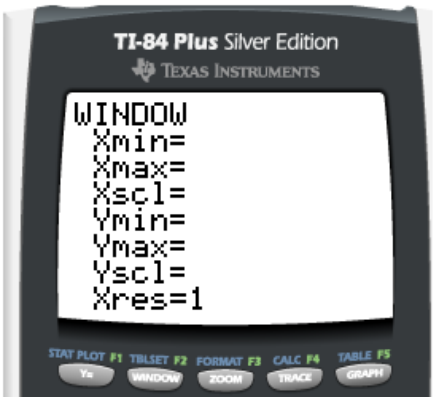


5. Solve the following by the given method.

Factoring	Factoring	Graphing (Calculator)
$3x^3 - 27x = 0$	$2x^2 = -9x + 5$	$x^2 + 9x = 32$

APPLICATIONS

6. From 1990 to 1996, the total number of radio stations that operated with a country format can be approximated by the function $R(t) = 2443 + 20.4t + 20.8t^2 - 3.75t^3$ for $0 \le t \le 6$ where $R(t)$ is the number of radio stations and $t = 0$ represents 1990.



a. Graph with "friendly" window. Record here ⟶

b. Find $R(2)$. What does it mean?

c. When was there the greatest total number of radio stations that operated with a country format?

7. Mr.Bean looks over the edge of the observation deck from the CN Tower. His glasses fall off, bummer. The table shows the height from the ground of his glasses over time. Graph the data with a friendly window.

WINDOW

xmin= ymin=

xmax= ymax=

xscl= yscl=

Time(sec)	0	2	4	6	8	10
Distance(ft)	1821	1757	1565	1245	797	221

a. Mr.Bean thinks a linear model would represent the data the best. He is wrong. Explain why he is wrong, and what model would be more appropriate.

b. Use regression and write the equation of your model. $y =$

c. Use the model to predict the height of his glasses at 7 seconds.

d. Find the time at which his glasses will be 1600 feet in the air.

e. When will his glasses smash into the ground?

f. What does the *y*-intercept represent?