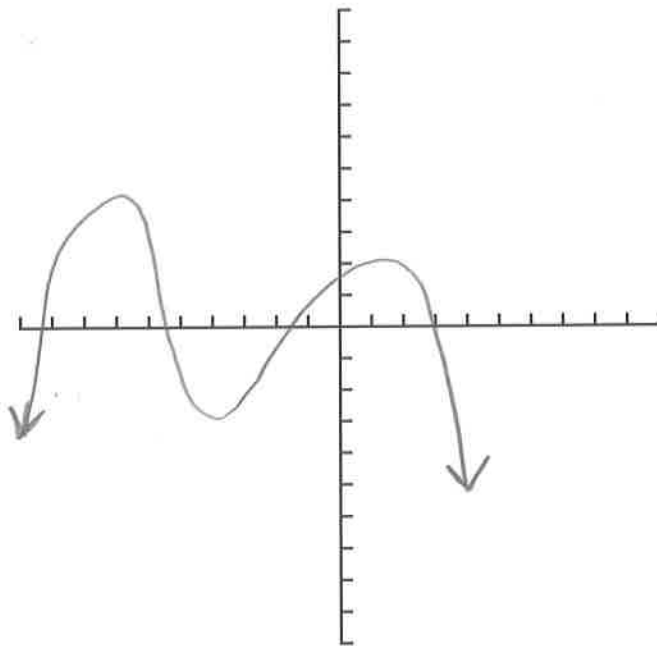Math 4

1-1 Practice

Name_____

Date_____

1. On the axis below, draw an example of an even degree polynomial, with a negative leading coefficient have four real roots and a positive y-intercept.

2. Consider the graph of the function below. What are some characteristics of the function? (Degree, zeros, leading coefficient, y-intercept, possible equation)

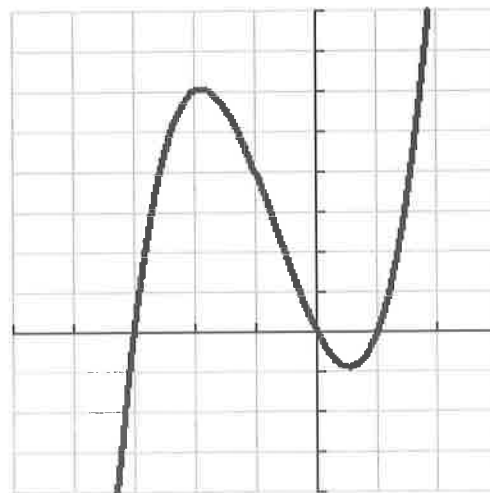Degree: Odd, >1

Zeroes: Real $\rightarrow X = ^-3, X=0, X=1$

lead coeff.: Positive

y-int: $(0,0)$

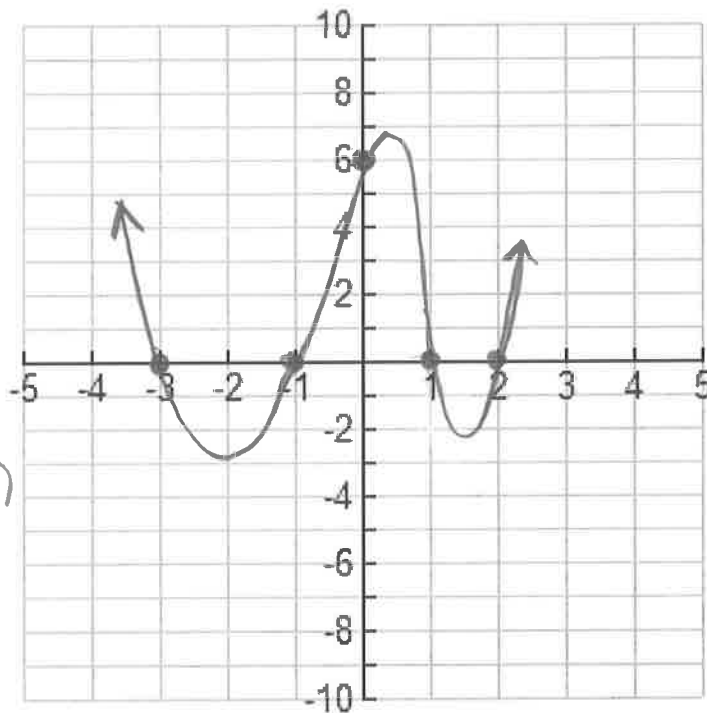equation:

$$f(x) = kx(x+3)(x-1)$$

Can calculate k by plugging in a point (not one of the zeroes) for x & $f(x)$.

3. Graph $y = (x - 2)(x + 1)(x + 3)(x - 1)$ on the axis below (without your calculator).
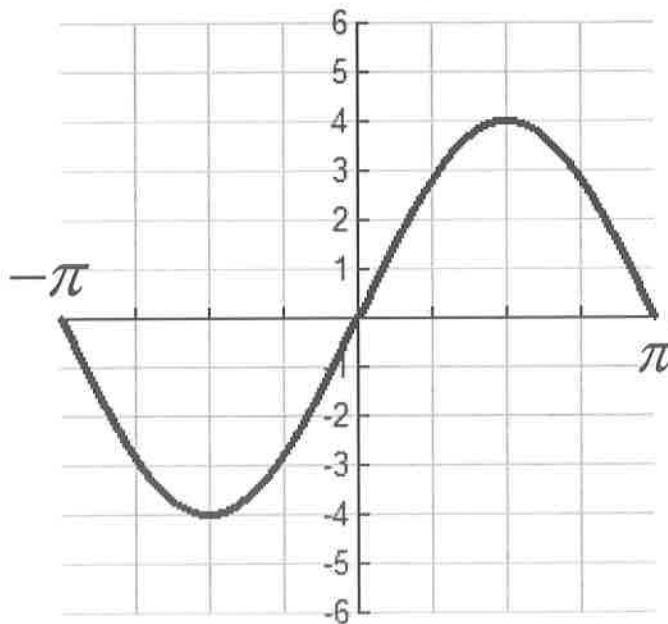
positive
lead
coeff.

$y\text{-int} = (0, 6)$

4. Find the equation for the graph below.

$Period = \dfrac{2\pi}{b}$

$f(x) = a \sin bx + c$

$\boxed{f(x) = 4 \sin x}$

sin
$a = 4$
Period $= 2\pi$