

5.26.15

1. Even or odd?

2. Positive or negative?

3. Absolute/Relative max/min?

$-1, 2$ Relative max

4. For what values of x is $f(x)$:

Increasing?

$-\infty, -1) (1, \infty)$

Decreasing?

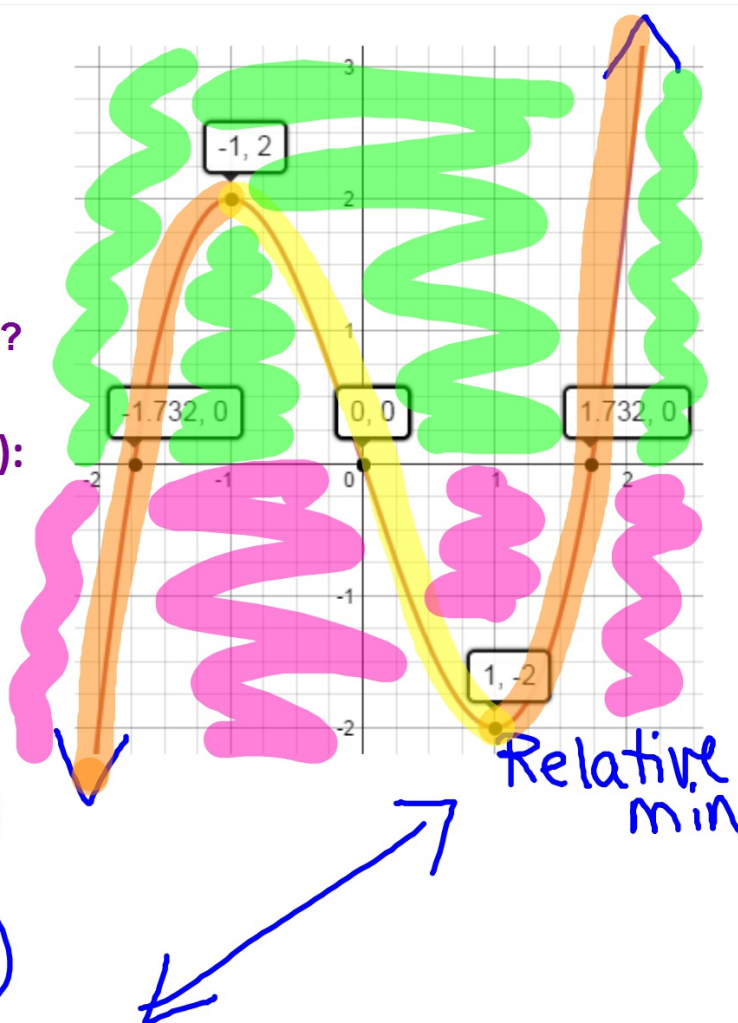
$(-1, 1)$

Positive?

$(-1.7, 0) (1.7, \infty)$

Negative?

$(-\infty, -1.7) (0, 1.7)$



①

X	-3	-2	-1	0	1	2	3
y	14	10	6	2	-2	-6	-10

✓ ✓ ✓ ✓ ✓ ✓

4 4 4 4 4 4

Linear

②

$$y = ab^x \quad a=4 \quad b=2$$

Exponential

$$y = 4 \cdot 2^x$$

X	-3	-2	-1	0	1	2	3
y	1/2	1	2	4	8	16	32

1/2 1 2 4 8 16

1/2 1 2 4 8

① $\overset{\text{y-int}}{(0, 6)} \quad (1, 15)$
 $x_1 \quad y_1 \quad x_2 \quad y_2$

$$b \text{ value} = \frac{y_2}{y_1}$$

$$b = \frac{15}{6}$$

$$b = 2.5$$

$$a \text{ value} = \text{initial value (y-int)}$$

$$a = 6$$

$$y = 6(2.5)^x \quad \text{Growth}$$

$$\textcircled{2} (1, 55) (0, 5)$$

$x_2 \ y_2 \quad x_1 \ y_1$

$$b = \frac{y_2}{y_1}$$

$$b = \frac{55}{5}$$

$$b = 11 \quad a = 5$$

$$y = 5(11)^x$$

1)

$$A = ?$$

$$P = 1,240$$

$$r = 0.0285$$

$$t = 2.5$$

$$A = (1,240)e^{(0.0285)(2.5)}$$

$$A = \$1,331.57$$

5)

$$A = 20\,000$$

$$P = 10\,000$$

$$r = 0.067$$

$$t = ?$$

$$20\,000 = 10\,000 e^{(0.067)t}$$

$$f(x) = 20\,000 e^{(0.067)x}$$

$$f(x) = 10\,000 e$$