

Relation

Domain, independent variable

Range, dependent variable

Functions

- Every input has exactly one output

$$y = f(x)$$

If $f(x) = 3x^2 - 5x + 4$

find $f(1)$,

$f(-2)$,

$f(a)$,

$f(a+h)$

Now find $\frac{f(a+h) - f(a)}{h}$

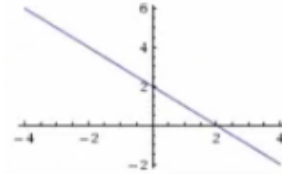
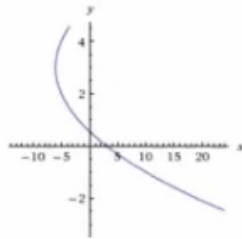
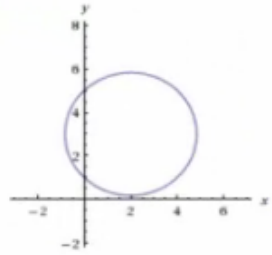
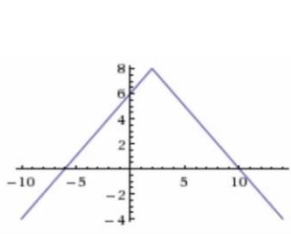
Given $f(x) = 3x^2 - 5x + 4$

solve for $f(x) = 0$

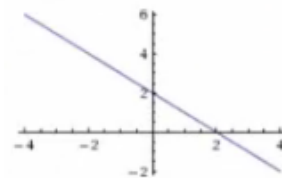
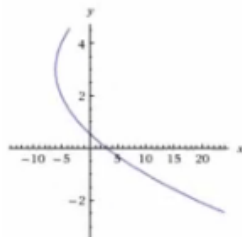
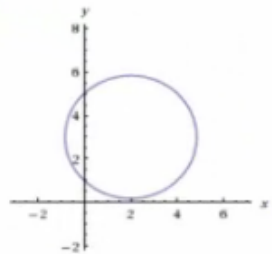
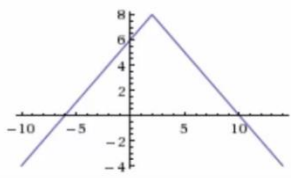
and $f(x) = 2$

One-to-one functions

Vertical Line Test



Horizontal Line Test



Examples:

1. $f(1)$ when x is 1, what is y or $f(x)$?

$$f(1) =$$

2. $f(x) = 2$ when y is 2, what is x (may be more than one value)?

$$f(\quad) = 2$$

3. $f(3) =$

4. $f(x) = 0$

