

Session 1 Worksheet

(Composition of Functions and Domain & Range)

Composition of Functions

$$F(x)=x+1, G(x)=x-5$$

1. $F(g(x))$

2. $G(f(x))$

3. $F(g(x)+f(x))$

$$H(x)=x^3, G(x)=2x$$

1. $H(x)+G(x)$

2. $G(H(x))$

3. $H(G(x)H(x))$

Domain & Range

What do these graphs look like?

$$F(x)=x^2$$

$$F(x)=\frac{1}{x^2}$$

$$F(x)=x^3$$

$$F(x)=\sqrt{x}$$

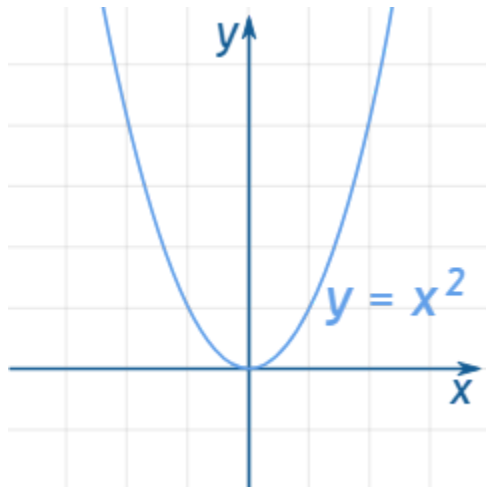
$$F(x)=\frac{1}{x}$$

$$F(x)=\sqrt[3]{x}$$

Find the Domain & Range

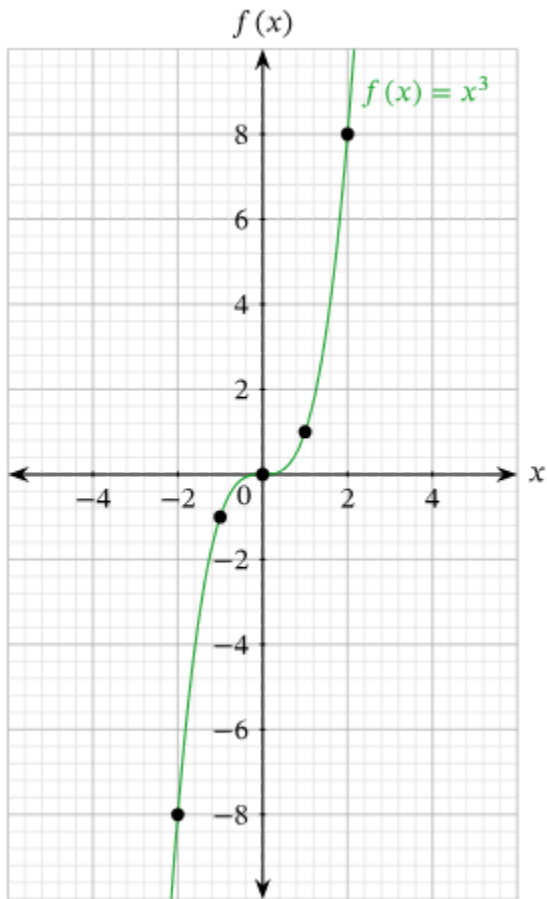
$$F(x)=x^2$$

Domain: _____, Range: _____



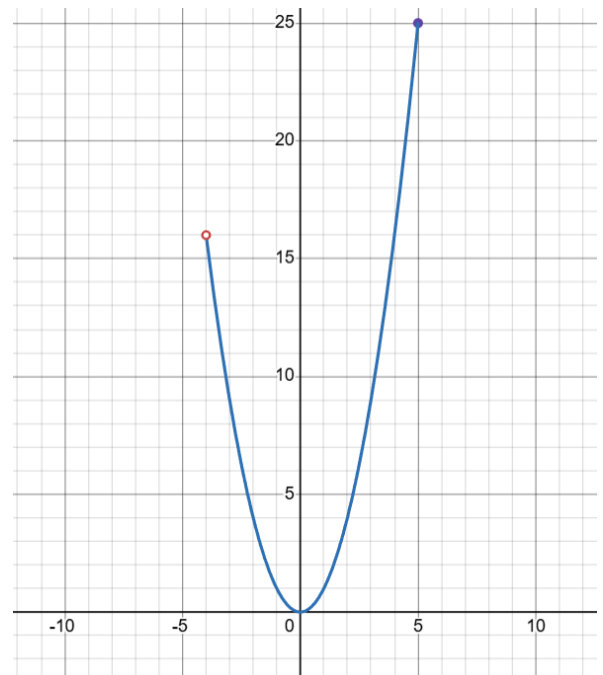
$$F(x)=x^3$$

Domain: _____, Range: _____



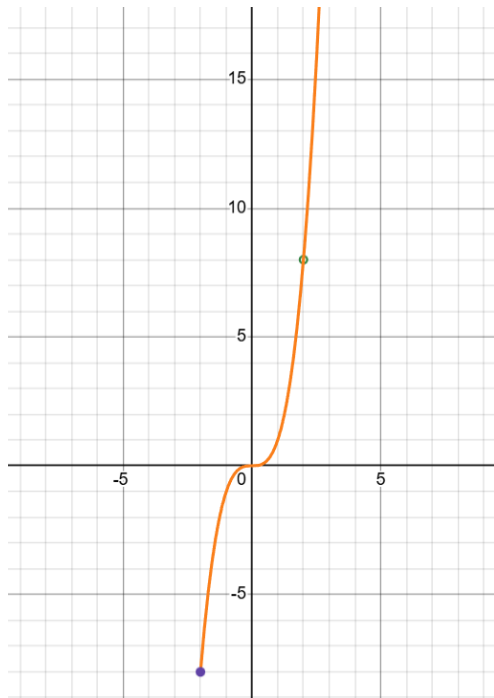
$$F(x)=x^2$$

Domain: _____ Range: _____



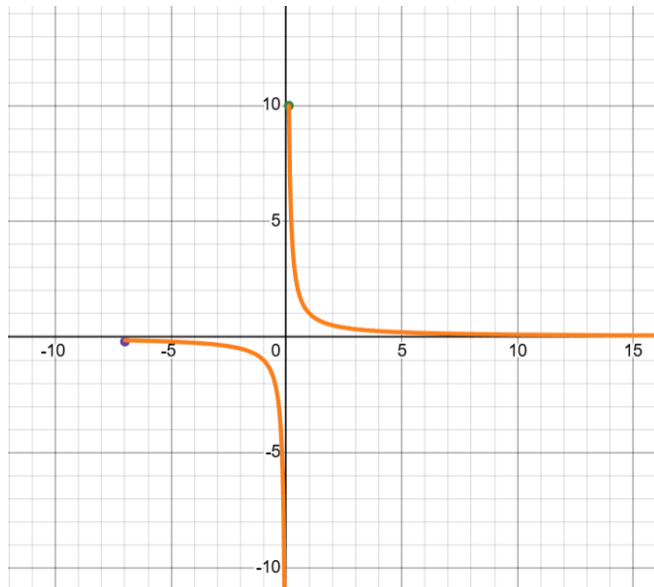
$$F(x)=x^3$$

Domain: _____, Range: _____



$$F(x)=\frac{1}{x}$$

Domain: _____, Range: _____



Create the graph for the equation and Domain & Range

$$F(x) = 4 + 2x^2$$

Domain: $(-1, \infty]$, Range: $[4, \infty]$

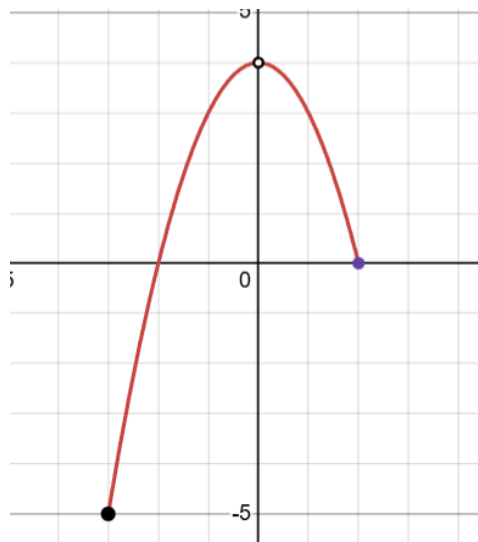
$$F(x) = \frac{1}{4} - 5x^3$$

Domain: $(-1, 0.8)$, Range: $(-5.25, -2.3)$

Create the Equation for the Graph

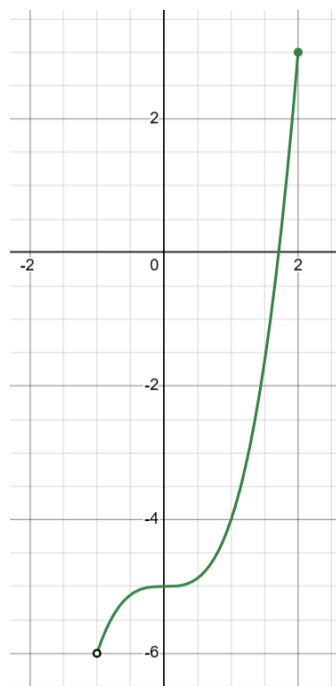
$F(x)=$

Domain: _____, Range: _____



$F(x)=$

Domain: _____, Range: _____



Inverse Functions and Graphs

1) $F(x) = \sqrt{x + 1}$

x= 0	x=2	x=4	x=5	x=8
y=	y=	y=	y=	y=

$F^{-1}(x) =$

x=	x=	x=	x=	x=
y=	y=	y=	y=	y=

2) $F^{-1}(x) = x^3 + 2$

x= 2	x=3	x=5	x=6	x=9
y=	y=	y=	y=	y=

$F^{-1}(x) =$

x=	x=	x=	x=	x=
y=	y=	y=	y=	y=