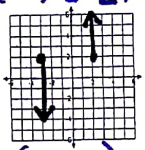
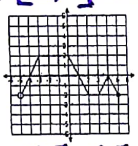
Domain and Range Worksheet #1 Name: KEY

State the domain and range interval notation

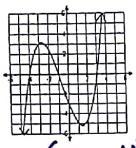
1) Domain $[-3] \cup [2]$
Range $(-\infty, 2] \cup [2, \infty)$



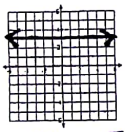
2) Domain $(-5, 5]$
Range $[-2, 2]$



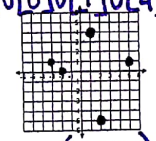
3) Domain $(-\infty, \infty)$
Range $(-\infty, \infty)$



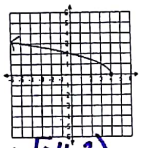
4) Domain $(-\infty, \infty)$
Range $[3]$



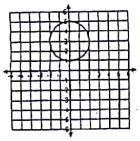
5) Domain $[-3] \cup [-2] \cup [1] \cup [2] \cup [5]$
Range $[-5] \cup [0] \cup [1] \cup [4]$



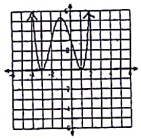
6) Domain $(-\infty, 4]$
Range $[0, \infty)$



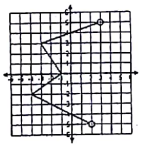
7) Domain $[-2, 2]$
Range $[1, 5]$



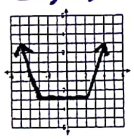
8) Domain $(-\infty, \infty)$
Range $[0, \infty)$



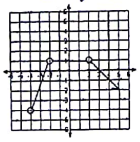
9) Domain $[-4, 3)$
Range $(-5, 5)$



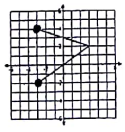
10) Domain $(-\infty, \infty)$
Range $[-3, \infty)$



11) Domain $(-3, \infty)$
Range $(-4, 1]$



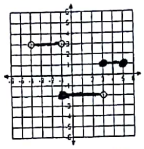
12) Domain $[-3, 3]$
Range $[-2, 4]$



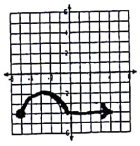
Domain and Range Worksheet #2 Name: _____

State the domain and range in interval notation

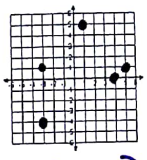
1) Domain $(-4, -1) \cup [-1, 3) \cup [3, 5]$
Range $[-2] \cup [1] \cup [3]$



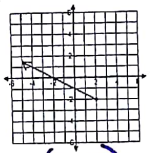
2) Domain $[-5, \infty)$
Range $[-4, -2]$



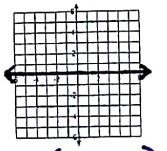
3) Domain $[-3] \cup [1] \cup [4] \cup [5]$
Range $[-4] \cup [0] \cup [1] \cup [5]$



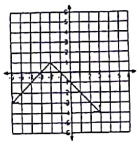
4) Domain $(-\infty, 2]$
Range $[-2, \infty)$



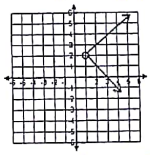
5) Domain $(-\infty, \infty)$
Range $[0]$



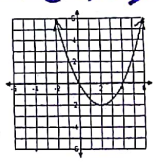
6) Domain $(-\infty, \infty)$
Range $(-\infty, 1]$



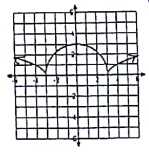
7) Domain $(1, \infty)$
Range $(-\infty, 2) \cup (2, \infty)$



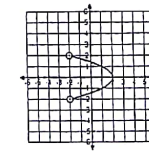
8) Domain $(-\infty, \infty)$
Range $[-2, \infty)$



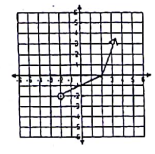
9) Domain $(-\infty, \infty)$
Range $[0, \infty)$



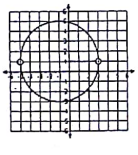
10) Domain $(-2, 2]$
Range $(-2, 2)$



11) Domain $(-2, \infty)$
Range $(-2, \infty)$



12) Domain $(-5, 3)$
Range $[-3, 5]$



Unit 2A Day 1 : Domain Notes (Algebraically)

* function is not defined when denominator = 0
* can't take square root of a negative number

Examples: Find the domain.

1) $y = x^2 + 1$ D: $(-\infty, \infty)$

2) $y = \frac{1}{3x-6}$ $3x-6 \neq 0$, $x \neq 2$ $(-\infty, 2) \cup (2, \infty)$

3) $y = \sqrt{15-3x}$ $15-3x \geq 0$, $-3x \geq -15$, $x \leq 5$ $(-\infty, 5]$

* 4) $y = \frac{1}{x^2-x}$ $x^2-x \neq 0$, $x(x-1) \neq 0$, $x \neq 0, x \neq 1$ $(-\infty, 0) \cup (0, 1) \cup (1, \infty)$

5) $y = \sqrt{x-7}$ $x-7 \geq 0$, $-x \geq 7$ $[7, \infty)$

6) $y = \frac{x}{\sqrt{x+1}}$ $x+1 \geq 0$, $x \geq -1$ $x+1 \neq 0$, $x \neq -1$ $(-1, \infty)$

7) $y = 3x$ $(-\infty, \infty)$

8) $y = \frac{1}{2x+8}$ $2x+8 \neq 0$, $x \neq -4$ $(-\infty, -4) \cup (-4, \infty)$