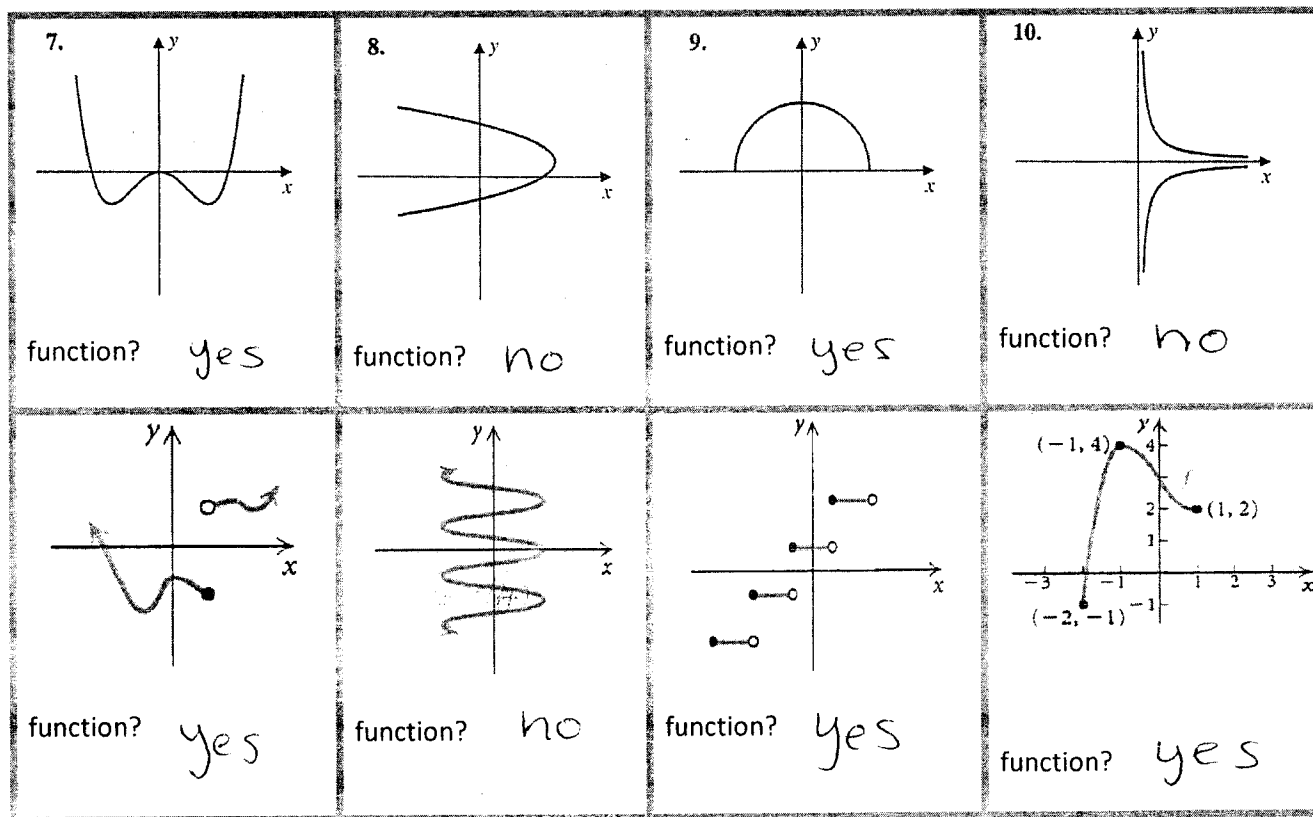


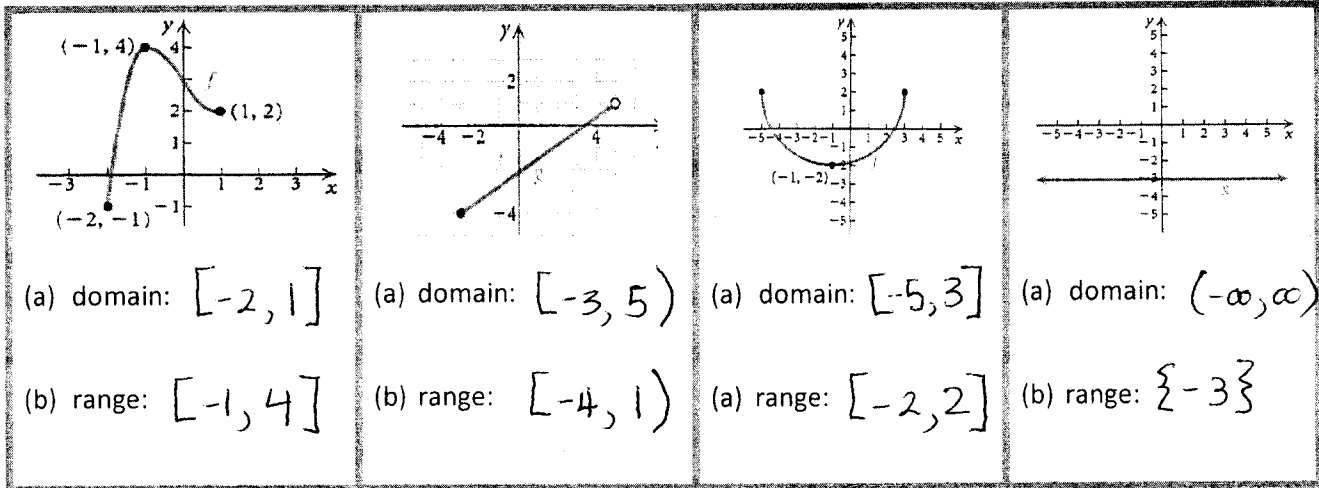
ICM Functions Worksheet #1

1. Determine whether each relation is a function



2. Name the domain and range of each function using interval notation.

<p>1. $f(x) = 7x + 4$</p> <p>D: $(-\infty, \infty)$</p> <p>R: $(-\infty, \infty)$</p>	<p>2. $f(x) = \frac{8}{x}$</p> <p>D: $(-\infty, 0) \cup (0, \infty)$</p> <p>R: $(-\infty, 0) \cup (0, \infty)$</p>	<p>3. $f(x) = \sqrt{x} + 4$</p> <p>D: $[0, \infty)$</p> <p>R: $[4, \infty)$</p>
<p>4. $f(x) = \frac{2}{1-2x}$</p> <p>D: $(-\infty, \frac{1}{2}) \cup (\frac{1}{2}, \infty)$</p> <p>R: $(-\infty, 0) \cup (0, \infty)$</p>	<p>5. $f(x) = 6x$</p> <p>D: $(-\infty, \infty)$</p> <p>R: $[0, \infty)$</p>	<p>6. $f(x) = \sqrt{x+4}$</p> <p>D: $[-4, \infty)$</p> <p>R: $[0, \infty)$</p>

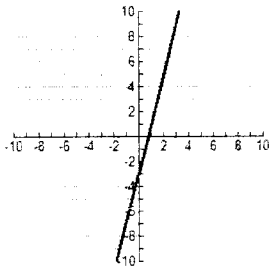


3. a. Determine whether each function is even, odd, or neither.

b. Is each function one-to-one?

1. $f(x) = 4x - 3$

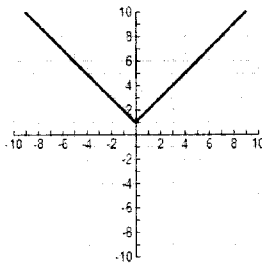
$f(-x) = 4(-x) - 3 = -4x - 3$



- a. neither
b. one-to-one

2. $f(x) = |x| + 1$

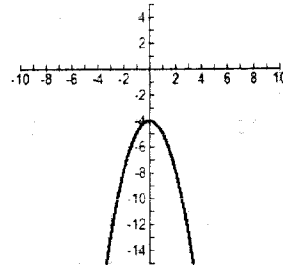
$f(-x) = |-x| + 1 = x + 1$



- a. even
b. not one-to-one

3. $f(x) = -x^2 - 4$

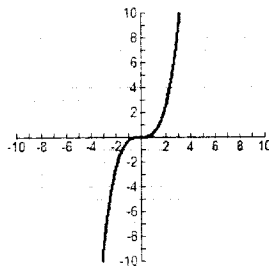
$f(-x) = -(-x)^2 - 4 = -x^2 - 4$



- a. even
b. not one-to-one

4. $f(x) = \frac{1}{3}x^3$

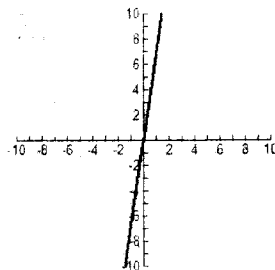
$f(-x) = \frac{1}{3}(-x)^3 = -\frac{1}{3}x^3$



- a. odd
b. one-to-one

5. $f(x) = 7x$

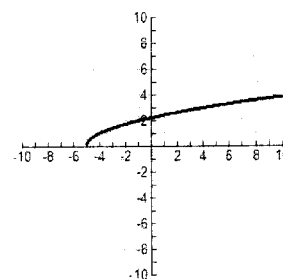
$f(-x) = 7(-x) = -7x$



- a. odd
b. one-to-one

6. $f(x) = \sqrt{x+5}$

$f(-x) = \sqrt{-x+5}$



- a. neither
b. one-to-one