

Alg2 HOMEWORK: Domain & Range / Order of Operations Worksheet #2

State the domain and range for each graph and then tell if the graph is a function. (Int = Interval)

<p>1.</p>	<p>Domain(Set) _____</p> <p>Range(Set) _____</p> <p>Domain(Int) _____</p> <p>Range (Int) _____</p> <p>Function? _____</p>	<p>2.</p>	<p>Domain(Set) _____</p> <p>Range(Set) _____</p> <p>Domain(Int) _____</p> <p>Range (Int) _____</p> <p>Function? _____</p>
<p>3.</p>	<p>Domain(Set) _____</p> <p>Range(Set) _____</p> <p>Domain(Int) _____</p> <p>Range (Int) _____</p> <p>Function? _____</p>	<p>4.</p>	<p>Domain(Set) _____</p> <p>Range(Set) _____</p> <p>Domain(Int) _____</p> <p>Range (Int) _____</p> <p>Function? _____</p>
<p>5.</p>	<p>Domain(Set) _____</p> <p>Range(Set) _____</p> <p>Domain(Int) _____</p> <p>Range (Int) _____</p> <p>Function? _____</p>	<p>6.</p>	<p>Domain(Set) _____</p> <p>Range(Set) _____</p> <p>Domain(Int) _____</p> <p>Range (Int) _____</p> <p>Function? _____</p>
<p>7.</p>	<p>Domain(Set) _____</p> <p>Range(Set) _____</p> <p>Domain(Int) _____</p> <p>Range (Int) _____</p> <p>Function? _____</p>	<p>8.</p>	<p>Domain(Set) _____</p> <p>Range(Set) _____</p> <p>Domain(Int) _____</p> <p>Range (Int) _____</p> <p>Function? _____</p>

<p>9. SAT CHALLENGE</p>	<p>9. SAT CHALLENGE.</p> <p>Domain(Set) _____</p> <p>Range(Set) _____</p> <p>Domain(Int) _____</p> <p>Range (Int) _____</p> <p>Function? _____</p>
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## Order of Operations (A)

Solve each expression using the correct order of operations.  
Show each step as you progress through each problem.

1)  $(-5)^2 - 4 \times (6 \div ((-7) + 8)) \times 3$

2)  $((-9) + 7)^3 \times (-5) \div ((4 - (-6)) \times 2)$

3)  $(2^2 \times (6 - 9)) \div 3 + (-4)^2$

4)  $((-7) + 7) \div (-9)^2 \times (8 - (-3)^2)$

5)  $((-7) + 9 - 7)^2 \times (5 \div (-5))^2$

6)  $((-3) \times (10 + (-7)))^2 \div 3 - (-9)^2$

Answers:

1) -47   2) 2   3) 12   4) 0   5) 25   6) -54

## Domain & Range ANSWERS:

- 1) Domain (set):  $\{x|-3 \leq x \leq 7\}$   
Range(Set):  $\{y|-3 \leq y \leq 2\}$   
Domain(Int):  $[-3, 7]$   
Range (Int):  $[-3, 2]$   
Function: yes, passes VLT
  
- 2) Domain (set):  $\{x|x \geq -5\}$   
Range(Set):  $\{y|-4 \leq y \leq -2\}$   
Domain(Int):  $[-5, \infty)$   
Range (Int):  $[-4, -2]$   
Function: yes, passes VLT
  
- 3) Domain (set):  $\{x|-4 \leq x \leq 4\}$   
Range(Set):  $\{y|-3 \leq y \leq 5\}$   
Domain(Int):  $[-4, 4]$   
Range (Int):  $[-3, 5]$   
Function: no, fails VLT
  
- 4) Domain (set):  $\{x|x \leq 2\}$   
Range(Set):  $\{y|y \geq -2\}$   
Domain(Int):  $(-\infty, 2]$   
Range (Int):  $[-2, \infty)$   
Function: yes, passes VLT
  
- 5) Domain (set):  $\{x|x \in R\}$   
Range(Set):  $\{y|y \geq -2\}$   
Domain(Int):  $(-\infty, \infty)$   
Range (Int):  $[-2, \infty)$   
Function: yes, passes VLT
  
- 6) Domain (set):  $\{x|x > 1\}$   
Range(Set):  $\{y|y \neq 2\}$  or  $\{y|y < 2$  or  $y > 2\}$   
Domain(Int):  $(1, \infty)$   
Range (Int):  $(-\infty, 2) \cup (2, \infty)$   
Function: no, fails VLT

7) Domain (set):  $\{x|x > -2\}$

Range(Set):  $\{y|y > -2\}$

Domain(Int):  $(-2, \infty)$

Range (Int):  $(-2, \infty)$

Function: yes, passes VLT

8) Domain (set):  $\{x|-2 < x \leq 2\}$

Range(Set):  $\{y|-2 < y < 2\}$

Domain(Int):  $(-2, 2]$

Range (Int):  $(-2, 2)$

Function: no, fails VLT

9) Domain (set):  $\{x|-5 < x < 3\}$

Range(Set):  $\{y|-3 \leq y < 1 \text{ or } 1 < y \leq 5\}$

Domain(Int):  $(-5, 3)$

Range (Int):  $[-3, 1) \cup (1, 5]$

Function: no, fails VLT