

****Friday, January 13 is the last day Ms. Hansen will accept any late/missing/extra credit work for 2nd quarter****

-->This includes any test/quiz retakes

Questions on 4.6 HW? We are taking a quiz next class, and will work on a practice quiz soon...

Practice Quiz

1. If the following points exist in $f(x)$, fill in what would they be in the inverse.

$f(x): \{(-1,2), (-3,4), (-5,6)\}$

$f^{-1}(x): \{(2,-1), (4,-3), (6,-5)\}$

3. If the dependent variable in $f(x)$ is feet, what is the independent variable in $f^{-1}(x)$?

feet

4. If the dependent variable in $f^{-1}(x)$ is perimeter, what is the independent variable in $f(x)$?

perimeter

$f(x)$ domain: $(-\infty, 4]$

$f(x)$ range: $(3, \infty)$

$f^{-1}(x)$ domain: $(3, \infty)$

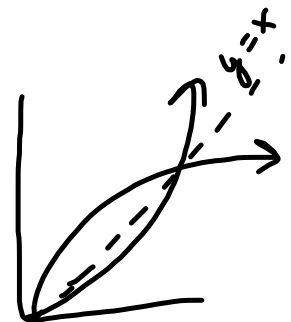
$f^{-1}(x)$ range: $(-\infty, 4]$

2. If a linear function, $f(x)$, has the slope $-\frac{7}{9}$, what would the slope be in the inverse, $f^{-1}(x)$?

$-\frac{9}{7}$ reciprocal

5. If a function, $f(x)$, has the following domain and range, fill in the domain and range for its inverse $f^{-1}(x)$.

6. A function, $f(x)$, and its inverse $f^{-1}(x)$, reflect across the special line $y = \underline{X}$.



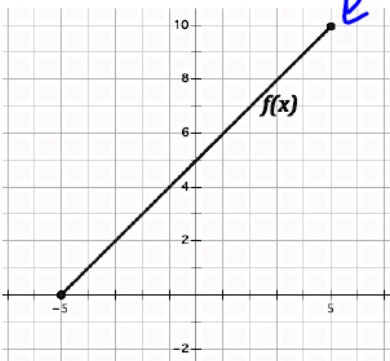
SM2 Module 4 SE.pdf - Adobe Acrobat Reader DC

File Edit View Window Help

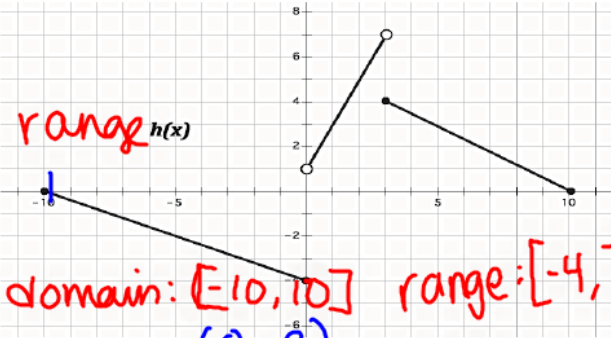
Home Tools SM2 Module 4 SE.p... x

30 / 38 125%

Given each representation of a function, determine the domain and range. Then indicate whether the function is discrete, continuous, or discontinuous and increasing, decreasing, or constant.

1. 

Description of Function:

2. 

range $h(x)$

domain: $[-10, 10]$ range: $[-4, 7)$

Description of Function:

$(0, 3)$ increasing
 $[-10, 0]$ decreasing
 $[4, 10]$ "

8.50 x 11.00 in

SM2 Module 4 SE.pdf - Adobe Acrobat Reader DC

File Edit View Window Help

Home Tools SM2 Module 4 SE.p... ×

33 / 38 125%

Solve the following for the indicated variable.

11. $C = 2\pi r$; Solve for r .

12. $A = \pi r^2$; Solve for r .

13. $V = \pi r^2 h$; Solve for h .

14. $V = \pi r^2 h$; Solve for r .

15. $V = e^3$; Solve for e .

16. $A = \frac{b_1 + b_2}{2} h$; Solve for h .

$$\sqrt{\frac{V}{\pi h}} = \sqrt{r^2} \rightarrow r = \sqrt{\frac{V}{\pi h}}$$

8.50 x 11.00 in

4.7 More Features, More Functions

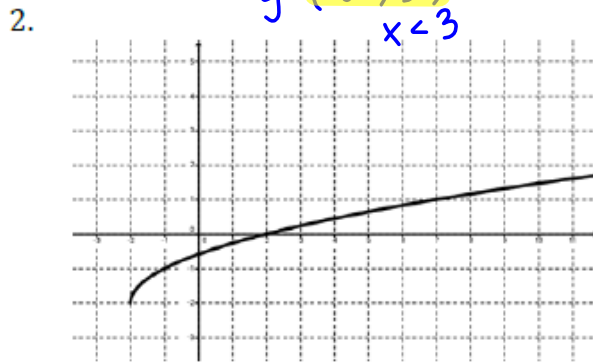
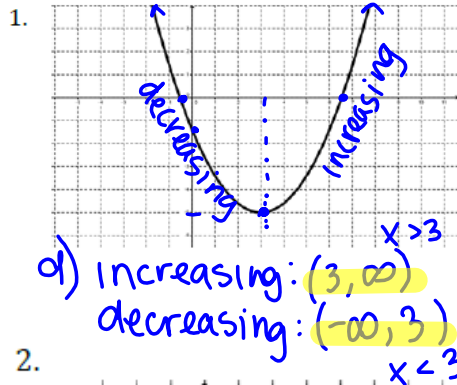
A Practice Understanding Task



Part I: Features of Functions

Find the following key features for each function:

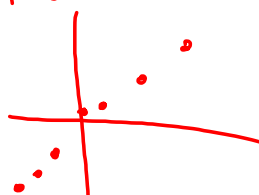
- Domain and range
- Intercepts (x & y)
- Location and value of maxima/minima
- Intervals where function is increasing or decreasing



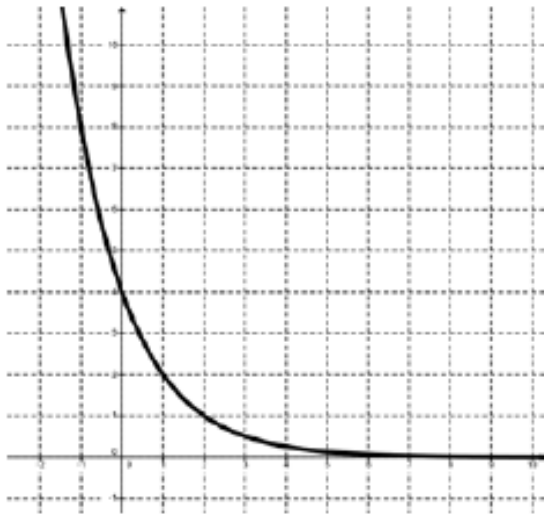
3.

x	f(x)	x	f(x)
-5	-14	-5	-14
-2	-5	1	4
-1	-2	-2	-5
0	1	3	10
1	4	5	16
3	10	0	1
5	16	-1	-2

- a) d: $\{-5, -2, -1, 0, 1, 3, 5\}$
 r: $\{-14, -5, -2, 1, 4, 10, 16\}$
- b) x-int: none
 y-int: $(0, 1)$
- c) min: $(-5, -14)$
 max: $(5, 16)$
- d) increasing: $(-5, 5)$
 decreasing: nowhere

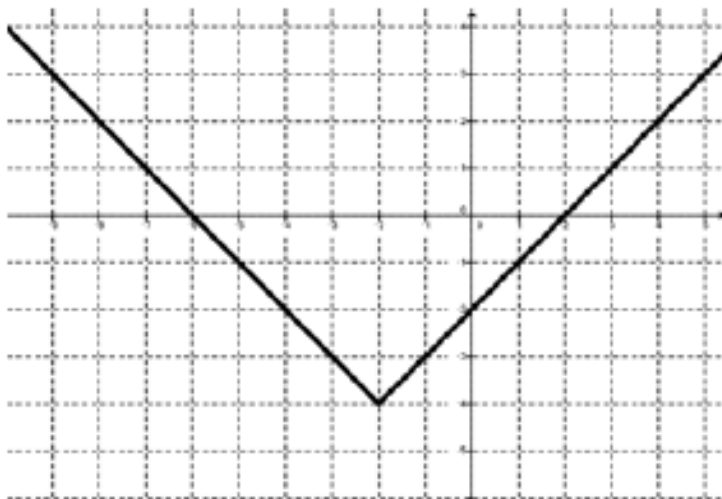


4.

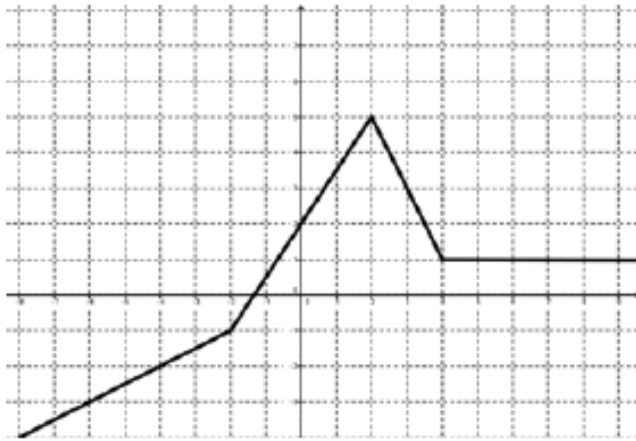


5. $g(x) = -\frac{1}{3}(x + 4)^2 - 6$

6.



7.



8. $h(x) = \sqrt{x - 3}$

Part II: Creating Functions

Directions: Write ~~two~~ ^{one} different functions that meet the given requirements.

for 3
problems,
9-20

9. A function that is always increasing
10. A function that is symmetrical about the y -axis
11. A function with a minimum of -2 at $x = 5$
12. A function that is decreasing from $(-\infty, -3)$ then increasing from $[-3, \infty)$
13. A function with zero real roots
14. A function that has a domain from $[3, \infty)$
15. A function with a range from $[3, \infty)$
16. A function with a constant rate of change
17. A function whose second difference is a constant rate of change
18. A function whose domain is the set of all natural numbers, and has a constant difference from one value to the next.
19. A function with x -intercepts at $(-3, 0)$ and $(3, 0)$
20. Create your own requirements.

Homework

Finish 4.7 "Ready, Set, Go"