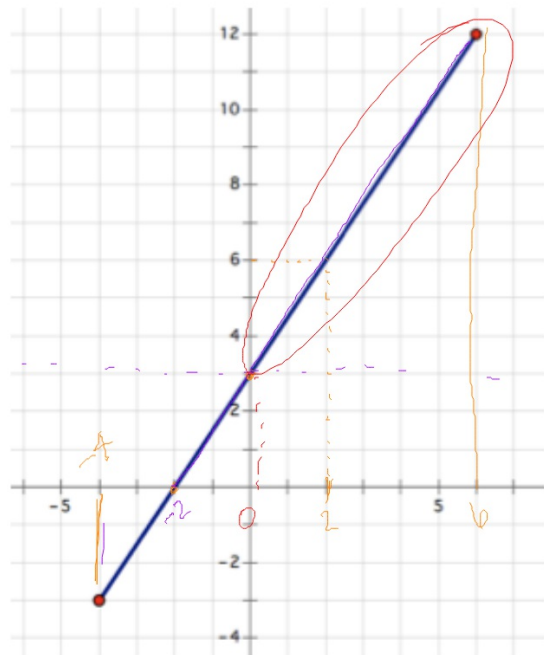


3.6 Interpreting Functions

Copy these question in notes!

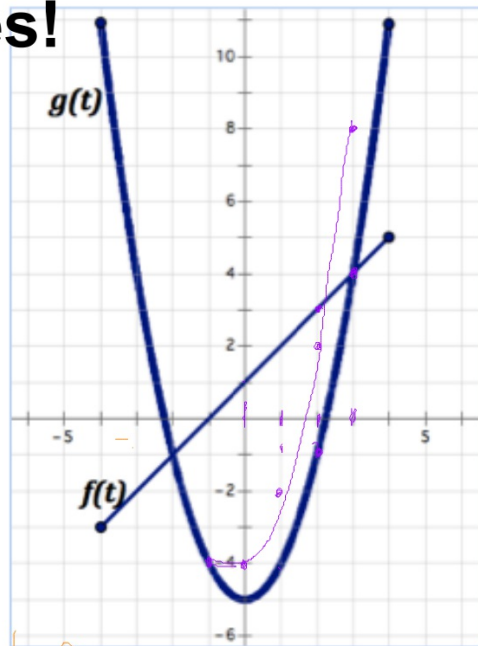
... approximations are appropriate when necessary

1. What is $f(2)$? = 6
2. For what values, if any, does $f(x) = 3$? $y = 3$
3. What is the x-intercept? $x = 0$
 $(-2, 0)$
4. What is the domain of $f(x)$? $[-4, 6]$
5. On what intervals is $f(x) > 0$? $y > 0$ $(-2, 6]$
6. On what intervals is $f(x)$ increasing? $[-4, 6]$
7. On what intervals is $f(x)$ decreasing? none
8. For what values, if any, is $f(x) > 3$? $(0, 6]$



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Consider the linear graph of $f(t)$ and the nonlinear graph of $g(t)$ to answer questions 9-14. Approximations are appropriate answers.



Where is $f(t) = g(t)$? ^{Point} $(-2, -1)$ $(3, 4)$

. Where is $f(t) > g(t)$? ^{Interval:} $(-2, 3)$

. What is $f(0) + g(0)$?
 $1 + (-5) = -4$

. What is $f(-1) + g(-1)$?
 $0 + (-4) = -4$

. Which is greater: $f(0)$ or $g(-3)$?
 $1 < 4$ $f(0) < g(-3)$

. Graph: $f(t) + g(t)$ from $[-1, 3]$

x	$f(x)$	$g(x)$	$f+g$
-1	0	-4	-4
0	1	-5	-4
1	2	-4	-2
2	3	-1	2
3	4	4	8

$(-1, -4)$
 $(0, -4)$
 $(1, -2)$
 $(2, 2)$
 $(3, 8)$

Copy these question in notes!

Following table of values represents two continuous functions, $f(x)$ and $g(x)$. Use the table to answer the following questions:

	$f(x)$	$g(x)$
5	42	-13
4	30	-9
3	20	-5
2	12	-1
1	6	3
0	2	7
-1	0	11
-2	0	15
-3	2	19
-4	6	23
-5	12	27
-6	20	31

15. What is $g(-3)$?
16. For what value(s) is $f(x) = 0$?
17. For what values is $f(x)$ increasing?
18. On what interval is $g(x) > f(x)$?
19. Which function is changing faster in the interval $[-5, 0]$? Why?

Use the following relationships to answer the questions below.

$$h(x) = 2^x$$

$$f(x) = 3x - 2$$

$$g(x) = 5$$

$$x = 4$$

$$y = 5x + 1$$

0. Which of the above relations are functions? Explain.

1. Find $f(2)$, $g(2)$, and $h(2)$.

2. Write the equation for $g(x) + h(x)$.

3. Where is $g(x) < h(x)$?

4. Where is $f(x)$ increasing?

5. Which of the above functions has the fastest growth rate?

