

Chapter 9 – The Language of Functions on the SAT Pre Test

Directions: Try these five problems without using any resources to help you and record the number of questions you answer correctly. The goal is to give you a snapshot of your current knowledge on this topic and a preview of the chapter to come. Use a calculator only if you need to.

Correct:

1.) For the function f defined below, k is a constant, and $f(3) = -41$. What is the value of $f(-3)$?

$$f(x) = 2kx^2 - 5$$

- A) -41
- B) -31
- C) 31
- D) 41

2.) The table below shows values for the linear function g . Which of the options defines g ?

n	1	2	3	4
$g(n)$	-2	3	8	13

- A) $g(n) = n - 3$
- B) $g(n) = 2n$
- C) $g(n) = 4n - 2$
- D) $g(n) = 5n - 7$

3.) If $f(x) = -2x^2 - 8$, what is $f(-5x)$ equal to?

- A) $-50x^2 - 8$
- B) $-5x^2 - 8$
- C) $10x^2 + 40x$
- D) $50x^2 + 40$

4.) Which of the following is an equation of a circle in the xy -plane with center $(5, -2)$ and a radius with endpoint $(9, -5)$?

- A) $(x - 5)^2 + (y + 2)^2 = 5$
- B) $(x + 5)^2 + (y - 2)^2 = 5$
- C) $(x - 5)^2 + (y + 2)^2 = 25$
- D) $(x + 5)^2 + (y - 2)^2 = 25$

5.) For what value of x is the function $h(x)$ undefined?

$$h(x) = \frac{1}{(x-7)^2 + 6(x-7) + 9}$$

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0	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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9	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Answer Key:

1.) A

2.) D

3.) A

4.) C

5.) 4