

SAT Math Sample Practice Homework

Flynn Cook, Benjamin Gallagher

Description

This is a sample homework to demonstrate the curriculum of our SAT Math tutoring. If you decide to pay for a real homework packet, you will receive a fixed amount of problems and an answer key with detailed explanations.

Instructions

Answer the following questions. You may use the Desmos online graphing calculator, as provided on your SAT. There is an answer key on page 2.

Questions

1. If $3x - 7 = 2x + 5$, what is the value of x ?
2. A rectangle has a length of 10 and a width of \sqrt{x} . If the area is 80, what is the value of x ?
3. If $f(x) = 2x^2 - 3x + 1$, what is the value of $f(4)$?
4. The sum of two numbers is 30, and one number is twice the other. What are the numbers?
5. A linear function on the xy-plane passes through the points $(2, 3)$ and $(6, 11)$. If the function can be expressed in the form $y = mx + b$, what is the value of m ?

Answer Key

1. $3x - 7 = 2x + 5$
Subtract $2x$ from both sides: $x - 7 = 5$
Add 7 to both sides: $x = 12$
2. Area = $10 \times \sqrt{x} = 80$
Solve for \sqrt{x} : $\sqrt{x} = \frac{80}{10} = 8$.
Square both sides: $x = 64$.
3. $f(4) = 2(4)^2 - 3(4) + 1 = 32 - 12 + 1 = 21$
4. Let the numbers be x and $2x$
 $x + 2x = 30$
 $3x = 30 \Rightarrow x = 10$
So, the numbers are 10 and 20 ($2x$)
5. $m = \text{slope} = \frac{11-3}{6-2} = \frac{8}{4} = 2$