

Solution College Algebra Quiz 6

Name _____ Score _____ /10

Please Print Clearly

Write complete sentences.

1. Recall the sequence σ (called sigma) is defined by the rule $\sigma(n)$ is the sum of the positive divisors of n .

a) What is the domain of the sequence σ ?

The domain of a sequence is the set of natural numbers.

b) Calculate $\sigma(18)$.

Answer:

The positive divisors of 18 are: 1, 2, 3, 6, 9, 18

Therefore $\sigma(18) = 1 + 2 + 3 + 6 + 9 + 18 = 39$

c) Verify that $n = 6$ is a solution to the equation $\sigma(n) = 12$.

The positive divisors of 6 are 1, 2, 3 and 6.

Therefore $\sigma(6) = 1 + 2 + 3 + 6 = 12$

Because 6 makes the equation true, it is a solution of the equation.

d) What is the range value associated with 7 by the function σ ?

$\sigma(7) = 1 + 7 = 8$

e) T **F** The graph of σ is a line.