Mean – Find the Missing Data

Key

Mean (average) – Add all the data and divide by the number of data pieces.

To determine a missing data value given the mean, you need to (work backwards (do the opposite).)

Steps:
1. (Multiply) the given mean by the total number of data pieces (include the variable).
2. Add all the given data pieces.
3. (Subtract) step #2's sum from step #1's product.

Guided Practice

1. Harper wants to earn an 88% in her Chemistry class. She has one quiz left to take.

   447

   On the first 5 quizzes, she received a 74%, 92%, 83%, 98%, 100%. What must she score on the 6th quiz to get the 88% she wants?

   #1 $88 \cdot 6 = 528$

   #2 $528 - 447 = 81\%$

   $\boxed{81\%}$

2. What is the value of x in the following data set?
   45, 62, 72, x, 59, 62; and the mean is 61

   300

   #1 $61 \cdot 6 = 366$

   #2 $366 - 300 = 66$

   $\boxed{x = 66}$

3. What is the value of x in the following data set?
   56, x, 48; Mean = 49

   104

   #1 $49 \cdot 3 = 147$

   #2 $147 - 104 = 43$

   $\boxed{x = 43}$

4. This week Sam has practiced piano for the following number of minutes: 16, 4, and 21. Sam has one more day to practice. How many minutes should Sam practice if he wants to practice for an average of 12 minutes?

   -41

   #1 $12 \cdot 4 = 48$

   #2 $48 - 41 = 7$

   $\boxed{7 \text{ minutes}}$