

**A2.S.3: Average Known with Missing Data: Calculate measures of central tendency with group frequency distributions**

- 1 The number of minutes students took to complete a quiz is summarized in the table below.

Minutes	14	15	16	17	18	19	20
Number of Students	5	3	$x$	5	2	10	1

If the mean number of minutes was 17, which equation could be used to calculate the value of  $x$ ?

1)  $17 = \frac{119 + x}{x}$

3)  $17 = \frac{446 + x}{26 + x}$

2)  $17 = \frac{119 + 16x}{x}$

4)  $17 = \frac{446 + 16x}{26 + x}$

- 2 The table below displays the results of a survey regarding the number of pets each student in a class has. The average number of pets per student in this class is 2.

Number of Pets	0	1	2	3	4	5
Number of Students	4	6	10	0	$k$	2

What is the value of  $k$  for this table?

1) 9

3) 8

2) 2

4) 4

**A2.S.3: Average Known with Missing Data: Calculate measures of central tendency with group frequency distributions****Answer Section**

1 ANS: 4 REF: 061124a2

2 ANS: 4

$$\frac{4 \cdot 0 + 6 \cdot 1 + 10 \cdot 2 + 0 \cdot 3 + 4k + 2 \cdot 5}{4 + 6 + 10 + 0 + k + 2} = 2$$

$$\frac{4k + 36}{k + 22} = 2$$

$$4k + 36 = 2k + 44$$

$$2k = 8$$

$$k = 4$$

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