Proportion Word Problems

Answer each question and round your answer to the nearest whole number.

1) If you can buy one can of pineapple chunks for $2 then how many can you buy with $10?

\[
\frac{2}{1 \text{ can}} = \frac{10}{x \text{ cans}}
\]

Cross multiply and divide

Let \( x \) = the number of cans

\[
10 = 2x
\]

\[
\frac{10}{2} = x
\]

\[
x = 5 \text{ cans}
\]

2) One jar of crushed ginger costs $2. How many jars can you buy for $36?

\[
\frac{2}{1 \text{x jars}} = \frac{36}{x}
\]

\[
\frac{36}{2} = x
\]

\[
18 = x
\]

3) One cantaloupe costs $2. How many cantaloupes can you buy for $44?

\[
\frac{2}{1 \text{ cantaloupe}} = \frac{44}{x}
\]

\[
44 = 2x
\]

\[
\frac{44}{2} = x
\]

\[
x = 22\text{ cantaloupes}
\]

4) One package of blueberries costs $3. How many packages of blueberries can you buy for $33?

\[
\frac{3}{1 \text{x packages}} = \frac{33}{x}
\]

\[
\frac{33}{3} = x
\]

\[
x = 11 \text{ packages}
\]

5) Shawna reduced the size of a rectangle to a height of 2 in. What is the new width if it was originally 24 in wide and 12 in tall?

\[
\frac{24}{12} = \frac{x}{2}
\]

\[
12x = 48
\]

\[
x = 4
\]

6) Ming was planning a trip to Western Samoa. Before going, she did some research and learned that the exchange rate is 6 Tala for $2. How many Tala would she get if she exchanged $6?

\[
\frac{6}{2} = \frac{x}{36}
\]

\[
\frac{36}{2} = \frac{2x}{2}
\]

\[
18 = x
\]

7) Jasmine bought 32 kiwi fruit for $16. How many kiwi can Lisa buy if she has $4?

\[
\frac{4}{32} = \frac{x}{16}
\]

\[
x = 8
\]

8) If you can buy four bulbs of elephant garlic for $8 then how many can you buy with $32?

\[
\frac{4}{8} = \frac{32}{x}
\]

\[
\frac{32}{2} = \frac{2x}{2}
\]

\[
x = 16
\]

9) One bunch of seedless black grapes costs $1.50. How many bunches can you buy for $13.50?

\[
\frac{1.50}{1} = \frac{13.50}{x}
\]

\[
a(13.50) = 3x
\]

\[
27 = 3x
\]

\[
\frac{27}{3} = \frac{3x}{3}
\]

\[
x = 9
\]

10) The money used in Jordan is called the Dinar. The exchange rate is $3 to 2 Dinars. Find how many dollars you would receive if you exchanged 22 Dinars.

\[
\frac{3}{2} = \frac{x}{22}
\]

\[
\frac{66}{2} = \frac{2x}{2}
\]

\[
x = 33
\]
11) Gabriella bought three cantaloupes for $7. How many cantaloupes can Shayna buy if she has $84?

\[
\frac{7}{3} = \frac{84}{x} \quad 3(84) = 7x \\
252 = 7x \\
\frac{252}{7} = x \\
36 = x
\]

12) Jenny was planning a trip to the United Arab Emirates. Before going, she did some research and learned that the exchange rate is 4 Dirhams for every $1. How many Dirhams would she get if she exchanged $5?

\[
\frac{1}{4} = \frac{5}{x} \\
20 = x
\]

13) Castel bought four bunches of fennel for $2.50. How many bunches of fennel can Mofor buy if he has $28?

\[
\frac{2.50}{4} = \frac{5}{8} \times \\
8(28) = 5x \\
224 = 5x \\
\frac{224}{5} = 5x \\
\frac{44.8}{8} = x
\]

14) If you can buy one fruit basket for $30 then how many can you buy with $420?

\[
\frac{30}{1} = \frac{420}{x} \\
420 = 30x \\
\frac{42}{3} = 3x \\
14 = x
\]

Answer each question. Round your answer to the nearest tenth. Round dollar amounts to the nearest cent.

15) Asanji took a trip to Mexico. Upon leaving he decided to convert all of his Pesos back into dollars. How many dollars did he receive if he exchanged 42.7 Pesos at a rate of $5.30 = 11.1 Pesos?

\[
\frac{5.3}{11.1} = \frac{3}{42.7} \\
11.1(x) = 5.3(42.7) \\
11.1x = 226.31 \\
x = \frac{226.31}{11.1} \\
x = 20.39
\]

16) The currency in Argentina is the Peso. The exchange rate is approximately $3 = 1 Peso. At this rate, how many Pesos would you get if you exchanged $121.10?

\[
\frac{3}{1} = \frac{121.10}{x} \\
\frac{121.10}{3} = 40.37
\]

17) Mary reduced the size of a painting to a width of 3.3 in. What is the new height if it was originally 32.5 in tall and 42.9 in wide?

\[
\text{Original} \\
\frac{\text{tall}}{\text{width}} = \frac{32.5}{42.9} = \frac{x}{3.3} \\
3.3(32.5) = 42.9x \\
107.25 = 42.9x \\
\frac{107.25}{42.9} = x \\
2.5 = x
\]

18) Molly bought two heads of cabbage for $1.80. How many heads of cabbage can Willie buy if he has $28.80?

\[
\frac{1.80}{2} = \frac{28.80}{x} \\
2(28.80) = 1.8x \\
57.60 = 1.8x \\
\frac{57.60}{1.8} = x \\
31.67 = x
\]