

Percent Word Problems Worksheet

1. The price of a tent was decreased by 15% and sold for \$76.49. What was the original price of the tent in dollars?

2. 40% of the students at Rockledge Middle School are musicians. 75% of those musicians have to read sheet music when they play their instruments. If 38 of the students can play their instruments without reading sheet music, how many students are there at Rockledge Middle School?

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1. The price of a tent was decreased by 15% and sold for \$76.49. What was the original price of the tent in dollars?

If the price was decreased by 15%, then the sale price is 15% less than 100% of the original price, or 85%.

Quantity = Percent \times Whole. Let t represent the original price of the tent.

$$76.49 = \frac{85}{100} \cdot t$$

$$76.49 = \frac{17}{20} \cdot t$$

$$76.49 \cdot \frac{20}{17} = \frac{17}{20} \cdot \frac{20}{17} \cdot t$$

$$\frac{1,529.8}{17} = 1 \cdot t$$

$$89.988 \approx t$$

Because this quantity represents money, the original price was \$89.99 after rounding to the nearest hundredth.

2. 40% of the students at Rockledge Middle School are musicians. 75% of those musicians have to read sheet music when they play their instruments. If 38 of the students can play their instruments without reading sheet music, how many students are there at Rockledge Middle School?

Let m represent the number of musicians at the school, and let s represent the total number of students. There are two whole quantities in this problem. The first whole quantity is the number of musicians. The 38 students who can play an instrument without reading sheet music represent 25% of the musicians.

Quantity = Percent \times Whole

$$38 = \frac{25}{100} \cdot m$$

$$38 = \frac{1}{4} \cdot m$$

$$38 \cdot \frac{4}{1} = \frac{1}{4} \cdot \frac{4}{1} \cdot m$$

$$\frac{152}{1} = 1 \cdot m$$

$$152 = m$$

There are 152 musicians in the school.

Quantity = Percent \times Whole

$$152 = \frac{40}{100} \cdot s$$

$$152 = \frac{2}{5} \cdot s$$

$$152 \cdot \frac{5}{2} = \frac{2}{5} \cdot \frac{5}{2} \cdot s$$

$$\frac{760}{2} = 1 \cdot s$$

$$380 = s$$

There are 380 students at Rockledge Middle School.