

10 Steps (or less) to Solving Word Questions in Math

1. Read the question carefully.

Example: A group of 24 hikers decides to hike all across Canada. They cover 5 412 km in 123 days. The hardest part of the trip was through the Rockies. Stormy weather reduced the hikers' progress to 6 km per day for 14 days. On one day they had to stay in their tents to wait out a storm. What was the average distance per day covered by the group?

2. Write down what you're being asked to find out. What is the question?

What was the average distance per day covered by the group?

If necessary, use a diagram or picture to help you understand what the question is. For example, you could trace the hikers' route on this map of the Trans Canada Trail and look at how far they would need to go each day to cross the country in 123 days.



3. Write down all the information that's relevant. Leave out what's not.

A group of...hikers...cover 5 412 km in 123 days.

Relevant:

Total distance: 5 412 km

Total number of days: 123 days

Not relevant:

Number of hikers: 24
Distance per day in the Rockies: 6km

Number of days in the Rockies: 14 days

The tents

The storm

4. If you are ready to write down a word equation, go to Step 7.

If you're not sure how to write an equation to answer the question, substitute very easy to understand numbers into the original question.

Example 1:

A group of hikers cover 100 km in 5 days. What was their average distance per day?

100 km

5 days

Answer: 20 km per day.

If the answer doesn't jump into your head, try even simpler numbers.

Example 2:

A group of hikers cover 50 km in 10 days. What was their average distance per day?

50 km

10 days

Answer: 5 km per day

5. Now decide what math equation to do to get the answer you already know.

Example 1: $100 \text{ km} \div 5 \text{ days} = 20 \text{ km per day}$

You can also write the answer as: 20 km/day

Example 2: $50 \text{ km} \div 10 \text{ days} = 5 \text{ km per day}$

You can also write the answer as: 5 km/day

6. Now put the numbers from the original question into your equation.

Go back to the original numbers and put them into the equation that you used with the simple numbers. You know that equation works, so you know you have the right method.

$5412 \text{ km} \div 123 \text{ days} = 44 \text{ km per day}$ or 44 km/day

Now go to Step 10.

7. If you are ready, write down a word equation.

Example: 5 412 km divided by 123 days equals the average number of km travelled each day

8. Estimate the answer by using rounding.

An approximate answer is good enough here.

5 412 km is about 5 000 km

123 days is about 100 days

$5\,000\text{ km} \div 100\text{ days} = 50\text{ km per day}$ or 50 km/day

9. Now, turn the word equation into a math equation and solve.

$5412\text{ km} \div 123\text{ days} = 44\text{ km per day}$

Check if your answer is in the same ballpark as your estimate. (If you estimated 50 km per day and your answer is 440 something is wrong somewhere.)

10. Double check your work.