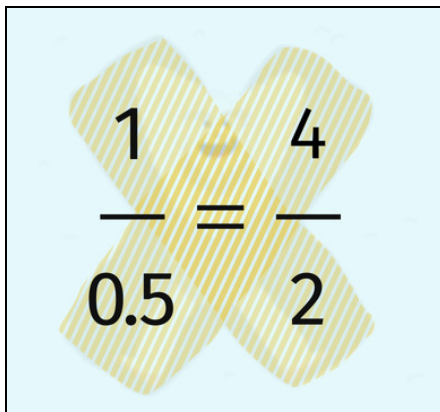




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# Solving Proportions


$$\frac{1}{0.5} = \frac{4}{2}$$
$$1 \times 2 = 0.5 \times f$$
$$\frac{2}{0.5} = \frac{0.5f}{0.5}$$
$$\frac{2}{0.5} = f$$
$$f = 4$$

- 1 Find the correct proportion.
- 2 Manipulate the formula to get the value for  $f$
- 3 Determine the depth of the snow after two hours.
- 4 Solve the following proportions.
- 5 Determine the number of days Freddy the yeti has to save his pocket money.
- 6 Determine the number of hours till the snow is four feet deep.
- + with lots of tips, answer keys, and detailed answer explanations for all of the problems.



The complete package, including all problems, hints, answers, and detailed answer explanations is available for all [sofatutor.com](https://www.sofatutor.com) subscribers.



## Find the correct proportion.

Choose the correct proportion.



Andretti the Yeti knows that he will have to sleep if the snow is four feet deep.

Today he has a date, and it's snowing a lot. The snow gets one foot deeper every half an hour. He's wants to know how much time will pass until the snow is 3.5 feet deep.

The variable  $h$  represents the unknown time.

**A**

$$\frac{0.5}{1} = \frac{3.5}{h}$$

**B**

$$\frac{1}{0.5} = \frac{h}{3.5}$$

**C**

$$\frac{1}{0.5} = \frac{3.5}{h}$$

**D**

$$\frac{1}{3.5} = \frac{3.5}{h}$$

**E**

$$\frac{1}{1.75} = \frac{3.5}{h}$$

**F**

$$\frac{3.5}{0.5} = \frac{1}{h}$$



## Hints for solving these problems

1  
of 6

### Find the correct proportion.

#### Hint #1

A proportion can be written as a fraction.

For example, six scoops of ice-cream for three yetis can be written as  $\frac{6}{3}$ .

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#### Hint #2

Keep in mind that for this ratio the amount of time is listed in the denominator.

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## Answers and detailed answer explanations for these problems

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of 6

### Find the correct proportion.

**Answer key:** C

What do we know?

- The snow gets one foot deeper every half an hour. We can write this as a ratio:  $\frac{1}{0.5}$ .
- In order to calculate the number of hours  $h$  for the given depth of 3.5 feet we can write the ratio:  $\frac{3.5}{h}$ .

We can now set up a proportion:

$$\frac{1}{0.5} = \frac{3.5}{h}$$

By cross-multiplying we can solve for the unknown value:

$$1 \times h = 0.5 \times 3.5$$

The result is  $h = 1.75$ . Andretti has to start in 1.75 hours.