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# Problem Solving Using Rates, Unit Rates, and Conversions



- 1 Convert simple units.
- 2 Utilize rate to compare and solve a work problem.
- 3 Compare using a unit rate.
- 4 Identify the work problems that can be solved by finding a rate.
- 5 Solve unit rate word problems.
- 6 Identify the correct solutions to the word problem.
- + 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.



# Convert simple units.

Match the corresponding values.

175.26 centimeters	152.4 centimeters	198.12 centimeters	182.88 centimeters
78 inches	69 inches	72 inches	60 inches

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A

5 feet

B

5.75 feet

C

6 feet

D

6.75 feet

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## Hints for solving these problems

1  
of 6

### Convert simple units.

#### Hint #1

There are 12 inches in 1 foot and 2.54 centimeters in 1 inch.

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#### Hint #2

7 feet are 84 inches.

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#### Hint #3

7 feet are 213.36 centimeters.

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## Answers and detailed answer explanations for these problems

1  
of 6

### Convert simple units.

**Answer key:** A: 2, 8 // B: 1, 6 // C: 4, 7 // D: 3, 5

There are 12 inches in 1 foot and 2.54 centimeters in 1 inch. To convert feet to inches, multiply by 12. To convert feet to centimeters, first multiply by 12 then by 2.54.

#### 5 feet

- There are 60 inches in 5 feet:  $5(12) = 60$
- There are 152.4 centimeters in 5 feet:  $5(12)(2.54) = 152.4$

#### 5.75 feet

- There are 69 inches in 5.75 feet:  $5.75(12) = 69$
- There are 175.26 centimeters in 5.75 feet:  $5.75(12)(2.54) = 175.26$

#### 6 feet

- There are 72 inches in 6 feet:  $6(12) = 72$
- There are 182.88 centimeters in 6 feet:  $6(12)(2.54) = 182.88$

#### 6.5 feet

- There are 78 inches in 6.5 feet:  $6.5(12) = 78$
- There are 198.12 centimeters in 6.5 feet:  $6.5(12)(2.54) = 198.12$