

In or Out – What's Your Decision?

Homework Sheet for Lesson 1

1. Use the standard measurements for the lengths of a pitch and crease lines to draw a scale diagram of all the crease-lines on a standard batting pitch using the [Standard Cricket Measures](#) provided.
2. From the list of variables you compiled in class, choose some you think will assist with being able to make the decision of whether the batsman was IN or OUT. Explain your choices.

In or Out – What's Your Decision?

Homework for Lesson 2:

1. There is a well known formula which relates the distance an object has traveled with the speed of its travel and the time taken.

The formula is $d = s \times t$, where d is the distance, s is the speed, and t is the time.

- a. Use the formula to calculate the distance traveled by a person jogging at the constant speed of 3 m/s for fifty seconds.
- b. b. Suppose you know that a person has been jogging at the constant speed of 4 m/s for 2 hour.

What extra calculation do you need to do before you can use the distance formula?

2. The formula can be transposed so that time is the subject.

This formula is $t = \frac{d}{s}$

- a. Use the formula to calculate the time taken by a bus to travel 100 km traveling at a constant speed of 60 km per hour.
- b. Suppose you know that a bus has traveled 100 km at the constant speed of 60 km per hour.

What extra calculation do you need to do before you can use the formula to calculate the time of the journey?

3. The formula can be transposed so that speed is the subject.

This formula is $s = \frac{d}{t}$

- a. Use the formula to calculate the speed of a cricketer running 20.1 metres in 5 seconds. (Give your answer correct to two decimal places and write the correct unit as part of your answer.)
- b. How fast would a cricketer be running if he or she covered 20.1 m in 9 seconds? (Give your answer correct to two decimal places and write the correct unit as part of your answer.)

In or Out – What's Your Decision?

Homework Answers for Lesson 2

1.
 - a. $d = s \times t = 3 \times 50 = 150 \text{ m}$
 - b. You would need to convert the time unit from hours to seconds. (2 hours = 120 seconds)

2.
 - a. $t = \frac{d}{s} = \frac{100}{60} = 1\frac{2}{3} \text{ hours.}$

- b. You would need to either convert the distance unit from kilometers to miles, or convert the speed unit from miles per hour to kilometers per hour.

3.

- a. $s = \frac{d}{t} = \frac{20.1}{5} = 4.02 \frac{m}{s}$

- b. $s = \frac{d}{t} = \frac{20.1}{9} = 2.23 \frac{m}{s}$

In or Out – What's Your Decision?

Homework for Lesson 3

1. What's your decision - was the batsman was IN or OUT?

Write a clear argument for your decision using all the data and facts discovered and/or calculated in the lessons.

2. In your calculations you have made several assumptions. For example, one such assumption is that the batsman ran in a straight line.

Write a list of any other assumptions which may have an effect on your calculations.

In or Out – What's Your Decision?

Homework for Lesson 4:

On paper, prepare your spreadsheet investigation for [Lesson 5](#).

Things to consider:

- Which value will I keep constant?
 - Which value will I vary?
 - What spreadsheet formulas will I need?
 - What headings should I use on my spreadsheet?
 - How will I know whether the batsman is IN or OUT?

In or Out – What's Your Decision?

Homework for Lesson 5:

1. Review your original decision: was the batsman IN or OUT? Clearly outline your argument.
2. Your teacher will give you another run-out photo. Make a judgement as to whether the batsman was IN or OUT based on your new skills. Use your knowledge of the impact of assumptions to help explain your decision.

In or Out – What's Your Decision?