

Who, where and when? (Trial & Improvement)

Who?

One of the following 4 people is a murderer. All of them have worked out the answers to the following questions to 1 decimal place:

Q1. $x^2 + 3x = 5$ (has an answer between 1 and 2)

Q2. $x^3 + 3x = 85$ (has an answer between 4 and 5)

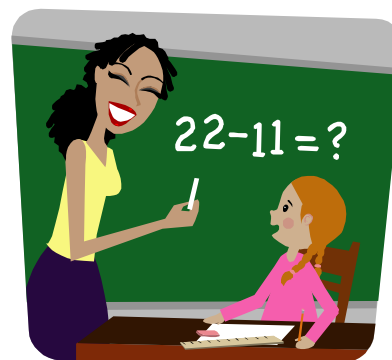
Q3. $x^3 - 5x = 59$ (has an answer between 4 and 5)

Q4. $x^2 + 2x + 3 = 17$ (has an answer between 2 and 3)

The murderer has made 3 errors. The victim has made 0 errors. The other suspects have made 1 error.



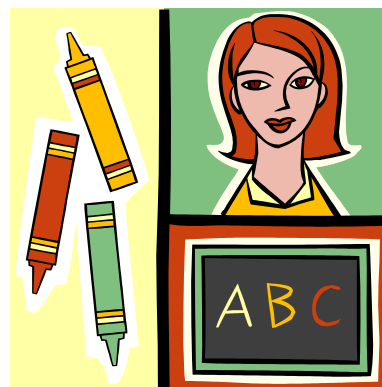
The **head teacher** says that
Q1 = 1.2, Q2 = 4.2, Q3 = 4.4 and Q4 = 2.9



The **maths teacher** says Q1 = 1.2, Q2 = 4.1, Q3 = 4.4 and Q4 = 2.8



The **caretaker** says Q1 = 1.2, Q2 = 4.2, Q3 = 4.3 and Q4 = 2.8



The **English teacher** says Q1 = 1.2, Q2 = 4.2, Q3 = 4.3 and Q4 = 2.9

Where?

The murder was committed at one of the locations below, but which one?
It happened where ALL the answers are true.

$$Q1. x^2 + 4x = 10$$

$$Q2. x^2 - 2x = 5$$

$$Q3. x^2 + x = 53$$

$$Q4. x^3 - \sqrt{x} = 114$$

The maths classroom

If the answers are 1.7, 3.4, 6.8 and 4.8

The dining hall

If the answers are 1.75, 3.45, 6.75 and 4.85

The gym

If the answers are 1.7, 3.4, 6.8 and 4.9

The playing fields

If the answers are 1.7, 3.4, 6.7 and 4.8

When?

Find the day where all the facts are correct

$$Q1. 3x^2 - 5x = 10$$

$$Q2. 2x^2 + 2x = 25$$

$$Q3. 3x^2 - 2x = 11$$

$$Q4. 3x^2 + 7x = 93$$

Monday

If Q1 = 2.8 and Q2 = 3.0 and Q3 = 2.3

Tuesday

If Q2 = 3.1 and Q3 = 2.2 and Q4 = 4.6

Wednesday

If Q1 = 2.8 and Q2 = 3.1 and Q4 = 4.5

Thursday

If Q2 = 3.0 and Q3 = 2.3 and Q4 = 4.5

The Accusation

Who

Where

When