

## 007 An algorithm a day...

### Algorithm Question

Source: OCR GCSE Computing Exam Jan 2013

In a factory, the wages earned by a worker is either £2 for every teddy bear they have made or £5 for every hour they have worked, whichever is higher.

Write an algorithm which:

- Allows the user to input the number of teddy bears made and the number of hours worked
- Calculates the wages for the number of teddy bears made - Calculates the wages for the number of hours worked - Outputs the larger of the two results.

[6 marks]

## Algorithm Example Answer

In a factory, the wages earned by a worker is either £2 for every teddy bear they have made or £5 for every hour they have worked, whichever is higher.

Write an algorithm which:

- Allows the user to input the number of teddy bears made and the number of hours worked
- Calculates the wages for the number of teddy bears made - Calculates the wages for the number of hours worked - Outputs the larger of the two results.

[6 marks]

**\*\*\*There are always different ways to solve a problem. This algorithm is just an example. What is important is that the logic is correct!\*\*\***

### LOGIC:

- **Input teddy bears and hours & cast inputs to integer types**
- **2 \* number of teddy bears**
- **5 \* hours**
- **Comparing the two answers**
- **Outputting the piece rate if it is greater - Outputting the hour rate if it is greater.**

### EXAMPLE ALGORITHM:

```
teddyBears = input("Enter number of bears")
hours = input("Enter hours worked")
teddyBears = int(teddyBears)
hours = int(hours)
perTeddyBear = 2 * teddyBears
perHour = 5 * hours
if perTeddyBear > perHour then
    print(perTeddyBear)
else
    print(perHour)
endif
```