

A mathematician goes into a supermarket and buys three items.

It has been a while since she has used a calculator and she multiplies the cost (in pounds, using the decimal point for the pence) instead of adding them.

At the checkout she says, "So that's £5.88" and the checkout attendant, correctly adding the items, agrees.

### **Can you find the values of the three items?**

*I wonder if the same can happen with other values?*

Alison wrote a computer program, and found three values that add together and multiply together to give £5.49.

Can you find them?

Alison's program also found three values that add together and multiply together to give £5.55. Can you find these?

### **Extension**

A mathematician goes into a supermarket and buys four items.

It has been a while since she has used a calculator and she multiplies the cost (in pounds, using the decimal point for the pence) instead of adding them.

At the checkout she says, "So that's £7.11" and the checkout attendant, correctly adding the items, agrees.

Find four possible prices of the items.

**Very Challenging Extension:** Prove that the costs giving rise to £7.11 are unique.