How Much Did it Cost? Example Answers

Age 7 to 11

Tim from Ysgol Uwchradd Tywyn wrote:

I ruled out anything under £1 because it has got to be more than 50p. Anything doubled over 50p makes more than £1.
I ruled out anything over £2 because you get change from the biggest coin, being £2.
Then I ruled out anything ending in anything apart from 0. Because you can't use coppers.
I was left with: £1.80 £1.60 £1.50 £1.20
I came to the answer of £1.80 because 60p doubled is £1.20, add them added together is £1.80. Meaning the ice cream is £1.20 and the crisps are 60p.

Tom from the same school as Tim went about it in a slightly different way:
The crisps would cost 60p and the ice cream would cost £1.20 making my solution £1.80
I worked this out by discounting anything below £1.65 based on minimum amount of crisps and double amount of ice-cream and the no copper coins. 75p, 80p, £1.25, £1.20, 90p, £1.00, £1.44, £1.45, l.56, £1.50 and £1.27
I discounted anything that wasn't in the 5x table because of the no copper coins rule. £3.06 and £1.74
I also discounted anything that wasnt divisible by 3 into a number in the 5x table because the ice-cream is twice as much as the crisps and the copper coin rule. £1.85 and £1.60
Finally I discounted anything that could be paid with 3 coins or less. £2.10 and £2.25
Leaving only £1.80

Here is another solution from Hayden from Davenies School who used the clues in a slightly different order:
I think the answer is £1.80.

The most valuable coin is £2 so I crossed out answers of £2 or more.
Then I crossed out any answers that needed copper coins.
Then I worked out that the crisps and ice cream had to cost more than £1.50 so I crossed more out.
I then crossed out any amount that could be paid with fewer than four coins.
This left me with two possible answers: £1.80 or £1.85.
As the ice cream costs exactly twice as much as the crisps, the answer is £1.80.

Morgan and Daniel from Greystoke Primary had another way again:
Using the clue that you will need more than three coins we eliminated 75p, £2.25 £1, £2.10, 80p, £1.50, £1.60, £1.25, £1.20 and 90p.
After that we moved on to the second clue - 'There must be change from the most valuable coin'! The most valuable coin is £2 so we could rule out £3.06
Then we moved onto the clues 'The crisps cost more than 50p' and 'The Ice Cream will cost double what the crisps cost!' Therefore we could rule out totals under £1.50 (£1.44, £1.45 and £1.27)
This left us with four options £1.56, £1.74, £1.85 and £1.80 We could rule out £1.50 and £1.74 using the 'You could pay without using copper coins clue'.
Now we had £1.85 and £1.80 remaining. We discarded the £1.85 because you can't have a total and a total half of it!
£1.80 is the solution!

Thank you, too, to everyone else who sent in a solution agreeing with the answer of £1.80.