Maths Day 3

Today, we are going to use the percentage work we did yesterday to increase or decrease a price by a given percentage – much as a shop owner would do in a sale or to make more expensive something that is in high demand or difficult to get hold of.

Follow the explanations below and then have a go at the calculations at the end.

Last year, a season ticket at Liverpool was £440.
If it increases by 10%, what will the price be next season?

How would we solve this?

Find 10% and then add it to the old price to get the new one.
so 440 ÷ 10 = 44 and 440 + 44 = £484

Last year, a season ticket at Liverpool was £440.
If it increases by 15%, what will be the price this season?

How would we solve this?

Find 15% (by finding 10% and 5% and adding them together) and then add it to the old price to get the new one.
so 10% =44; 5% = 22, 44 +22 = 66.
440 + 66 = £506

A DVD was originally £12 but in a sale it had 25% taken off.
What is its new price?
How would we solve this?

Find 25% (by halving 100% and then halving again to find 25%)
and then take it off the old price to get the new one.
so 25% = 12 ÷ 2 ÷ 2 = £3
£12 - £3 = £9

A calculator was originally £8.50 but in a sale it had 30% taken off.
What is its new price?
How would we solve this?

Find 30% and then take it off the old price to get the new one.
so 30% = 10% x 3; 10% = 850p ÷10 = 85p
85p x 3 = 255p
850 - 255 = 595p or £5.95

Now try these: Do as many as you can

1). Increase £250 by 20%
2). Increase £400 by 50%
3.) Increase £300 by 15%
4). Decrease £120 by 30%
5). Decrease £800 by 25%
6). Decrease £480 by 45%

7). A large bottle holds 40% more coke than a small bottle.
If the small bottle holds 300ml, what will the large bottle hold?

8). Amanda puts a £480 television into a 25% off sale.
How much will it cost in the sale?

9). All NHS staff gets a 5% pay rise (yeh!). If they were earning £24,000, what will their new pay be?

10). A laptop costs £560 in a 30% off sale. How much was it before the sale?
(be careful with this one; it is a bit of a challenge!)

Do e-mail Mr Crick, if you want the answers to any of the questions of this sheet.