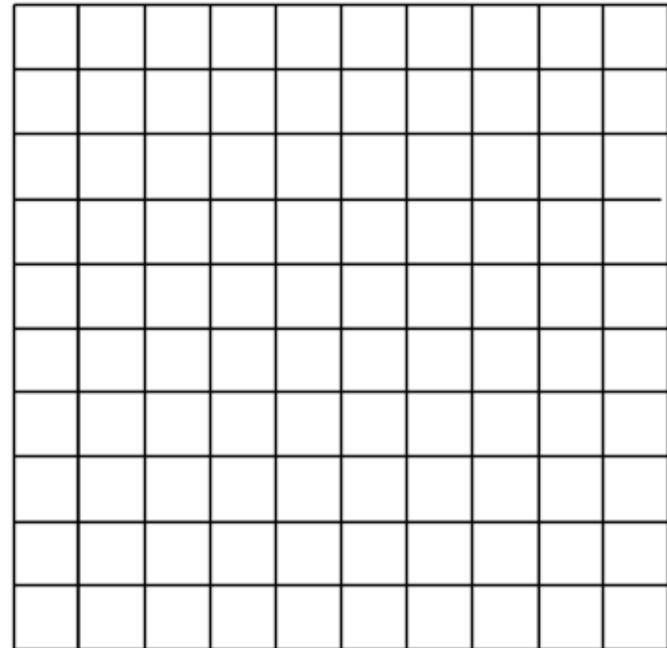


Percentages Challenges



Challenge 1

If I place 2p on each of the 100 squares below, how much will I have in total?

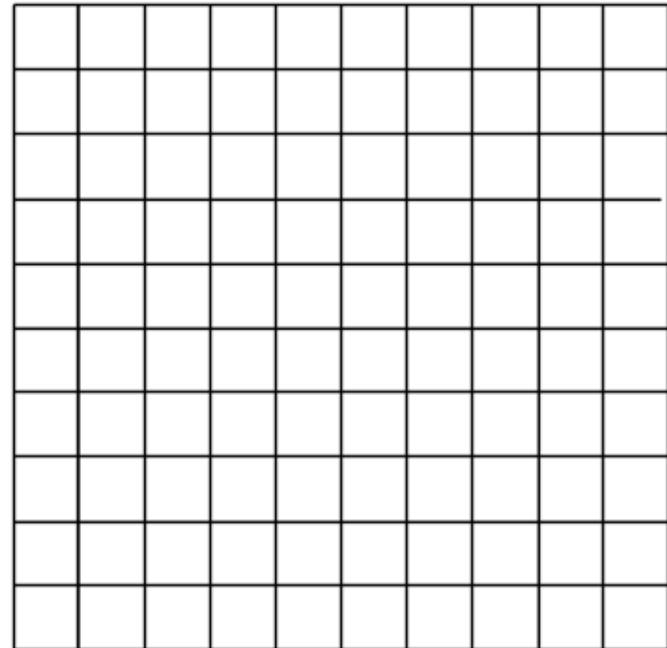


How much would be in 30 of the squares?

Complete this calculation: 30% of ____p = ____p

Challenge 2

If I place 23p on each of the 100 squares below, how much will I have in total?



How much would be in 15 of the squares?

Complete this calculation: 15% of £_____ = £_____

Challenge 3

Work out the following:

10% of £60

10% of 90kg

10% of 30m

10% of £34

20% of £60

5% of 90kg

15% of 30m

30% of £34

40% of £70

35% of 120km



Challenge 4

If Sandtex costs £23 a tin and a tin of Cuprinol costs £15 then how much would it cost to buy:

1 tin of Sandtex and 1 of Cuprinol

3 tins of Sandtex and 2 of Cuprinol

8 tins of Sandtex and 5 of Cuprinol

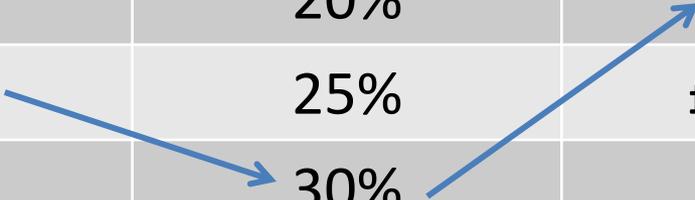


Challenge 5

30% of £40 = £12

Find other links in the diagram below.

Start	Percentage	Answer
£32	20%	£12
£40	25%	£14.40
£16	30%	£20
£80	40%	£8
£36	50%	£10
£60	12.5%	£6.40



Challenge 6

Imagine you are being offered an increase in your pocket money.

You can either have:-

a) a 20% increase this year, followed by a 30% increase next year

OR

b) a 30% increase this year, followed by a 20% increase next year?

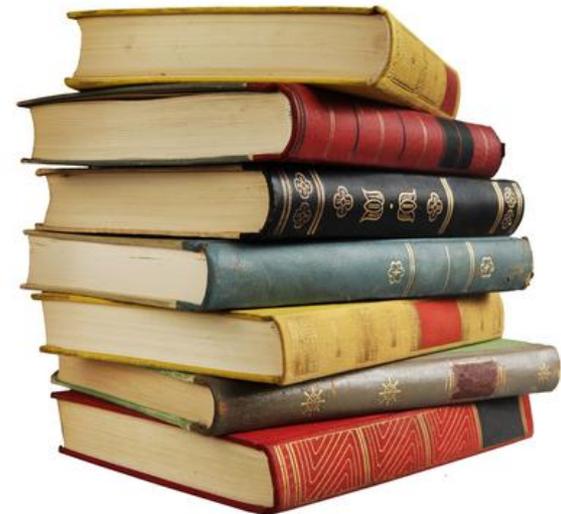
Which would you choose and why?



Challenge 7

A book has been reduced by 20% in a sale. If the sale price was £8.60 what was the original price?

An ereader is priced at £58 after a 15% discount. What was the original price?



Challenge 8

You have been asked to find 32% of £80.

Which of the methods below would enable you to get the correct answer? (Hint: there is more than one)

- a) Add $£8 + £8 + £8 + £0.80 + £0.80$
- b) $1\% = £8$ so calculate 32 times $£8$
- c) Multiply $£80$ by 0.32
- d) Divide $£80$ by 100 , multiply by 40 .
- e) Divide 80 by 32 then multiply by 100 .
- f) Divide 32 by 100 , multiply by $£80$.

Challenge 9



On Mathland TV a political commentator summed up an election result as follows.

A Labour majority of 1729 last time has been turned into a Conservative majority of 1654 in this election and the conservative candidate has obtained 38% of the poll. Labour has taken second place. The Liberal Democrat has obtained only 14% of the poll and has been beaten into fourth place by the SNP candidate who has 50 more votes than the Liberal Democrat.

Given that there were just four candidates and that the figures quoted were exact find the number of votes polled for each candidate.

[Source](#)

Challenge 10

You have been asked to increase £160 by 40%.

Which of the methods below would enable you to get the correct answer? (Hint: there is more than one)

- a) Add £30 to £160
- b) Multiply £160 by 40
- c) Divide £160 by 100, multiply by 40, and then add the result to £160
- d) Work out 140% of £160
- e) Multiply £160 by 1.40
- f) Divide 40 by 100, multiply by £160, and then add the result to £160

Challenge 11

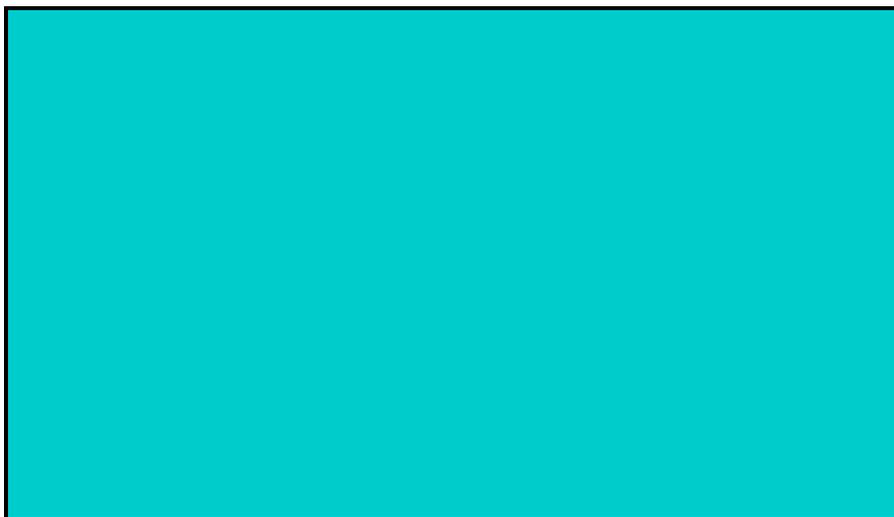
I spend 20% of my salary on household bills, how much do I earn, if my bills cost £210 a month?

I spend 32% of my salary on paying my mortgage each month, how much is my mortgage?



Challenge 12

If the base of a rectangle is increased by 10% and the width is reduced by 10% by what percentage is the area changed by ?
Does it matter what the starting size of the rectangle is?
Explain clearly your reasoning.



Challenge 13

If I invest £3000 in a savings account and get interest of 4% added annually, how many years until I have £4000?

If it takes 20 years to double my money what interest rate was I getting?



Challenge 14

If the base of a rectangle is increased by 10% and the area is unchanged, by what percentage (exactly) is the width decreased by ?.



Challenge 15

I buy a TV which has been reduced by 20% and a laptop which has been reduced by 10%.

If they cost £800 altogether, what might the original prices have been?

