

FRACTIONS AND PERCENTAGES	
1	Lynne says that if you divide a number by $\frac{1}{2}$, the answer is twice as big as the number you started with. Is she right? Explain your answer.
2	Would you prefer £3.00 shared between 4 people or £6.00 shared between 10 people. Explain why.
3	How would you decrease £12 by 15%? Can you do it a different way?
4	The answer is 10%. Make up an easy question and a hard one. Showbie Which one is harder and why?
5	Ian scored 80% in a test. He got 40 answers right. How many questions were there (assuming you got one point for each question)?
6	We are having a new carpet. The carpet costs £480, but 12.5% is added to have it fitted. How much will it cost in total?
7	The shop has 25% off everything. I buy a scanner that should have been £240. When I go to pay, the shop assistant says I can have a further 5% off if I open a store card. How much would I pay if I open the card?
8	Dean says 10% is the same as $\frac{1}{10}$ so 20% must be the same as $\frac{1}{20}$. Is he right? Explain.
9	Always, sometimes, never? Joe says 40% is always greater than 15%.

FRACTIONS AND PERCENTAGES		ANSWERS																
1	Lynne says that if you divide a number by $\frac{1}{2}$, the answer is twice as big as the number you started with. Is she right? Explain your answer.	Your explanation can be linked to proving it mathematically. For instance: $4 \div \frac{1}{2} = 8$ Visualise it: 4 whole pizzas divided into halves will give you 8 pieces. It also applies to fractions and decimals. $\frac{1}{2} = 0.5$ $0.5 \div 0.5 = 1$																
2	Would you prefer £3.00 shared between 4 people or £6.00 shared between 10 people. Explain why.	$\pounds 3.00 \div 4 = \pounds 0.75$ or 75 p $\pounds 6.00 \div 10 = \pounds 0.60$ or 60p That's why I prefer £3 shared amongst 4 people because everyone would get more.																
3	How would you decrease £12 by 15%? Can you do it a different way?	This is a two-step question plus showing another way. First find 15%, then take that away from £12. Answer £10.80 You could have taken away 10% and then 5%.																
4	The answer is 10%. Make up an easy question and a hard one. Which one is harder and why?	If you are working from home, send me the answer on Showbie .																
5	Ian scored 80% in a test. He got 40 answers right. How many questions were there (assuming you got one point for each question)?	80% of a number = $80/100 = 8/10 = 4/5$ and that is 40 \rightarrow 20% is missing You could have used a bar model. <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>10%</td><td>10%</td><td>10%</td><td>10%</td><td>10%</td><td>10%</td><td>10%</td><td>10%</td> </tr> <tr> <td>5</td><td>5</td><td>5</td><td>5</td><td>5</td><td>5</td><td>5</td><td>5</td> </tr> </table> 40 divided into 10% means to divide it by 8 \rightarrow 5 20% are missing, that's another 10 Overall, there were 50 questions in the test.	10%	10%	10%	10%	10%	10%	10%	10%	5	5	5	5	5	5	5	5
10%	10%	10%	10%	10%	10%	10%	10%											
5	5	5	5	5	5	5	5											
6	We are having a new carpet. The carpet costs £480, but 12.5% is added to have it fitted. How much will it cost in total?	12.5% is half of 25% $25\% = \frac{1}{4}$ $\frac{1}{4}$ of £480 = 120; half of that is £60 Total cost $\pounds 480 + \pounds 60 = \pounds 540$																
7	The shop has 25% off everything. I buy a scanner that should have been £240. When I go to pay, the shop assistant says I can have a further 5% off if I open a store card. How much would I pay if I open the card?	The question is if you get 5% off the original price or the discounted price. If you calculated to get 5% off the original price, you'd have to pay £168. If you you calculated to get 5% off the already discounted price, then you'd have to pay £171.																
8	Dean says 10% is the same as $\frac{1}{10}$ so 20% must be the same as $\frac{1}{20}$. Is he right? Explain.	Dean is not right and should redo Year 6. $\frac{1}{10} = 0.1 = 10/100$ $\frac{1}{20} = 0.05 = 5/100$																
9	Always, sometimes, never? Joe says 40% is always greater than 15%.	Sometimes You need to find examples that prove when 40% is greater, e.g. 40% of 100 = 40 and 15% of 100 = 15 $\rightarrow 40 > 15$ But 15% of 2000 = 300 and that is more than 40																

