Representations of the second second



Effective Crash Course • Practice Questions • Homework • Past Paper Questions

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- Normal Price
- Simple Interest





2

Fractions



- Shading fractions
- Addition, Subtraction, Division, Multiplication of fractions
- Converting Fractions (improper to mixed)
- Multiples, Factors, HCF, LCM
- Comparing fractions and Equivalent fractions

In the diagram, the small squares are all the same sizes. What fraction of the large square is shaded?



What fraction of this shape is shaded?







9



George eats $\frac{1}{8}$ of a cake and Emily eats $\frac{1}{6}$ of what is left. Charlie, Jane and Hannah share equally the remainder. What fraction of the cake did Jane eat?



Daniel and his friends complete a 50 - piece jigsaw-puzzle.
Harry completes 1/10 of the jigsaw - puzzle.
Ben completes 3/50 of the jigsaw - puzzle.
Claire completes 15 pieces.
Daniel finishes the rest of the jigsaw - puzzle.
What fraction of the jigsaw - puzzle does Daniel complete?







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Homework

B Josh has a piece of cloth that is $\frac{7}{25}$ metres long. Emma's piece is $\frac{3}{50}$ m [2] long and Anna has a piece of cloth measuring $\frac{57}{100}$ m. If the children put their pieces of cloth end-to-end, What will be the total length in metres?



Bella uses her grandma's recipe for a christmas party. What is the total [2] weight of ingredients used?







Homework

12

Richard started an office construction project three years ago.During that year, Richard constructed one-fifth of the office.2 years ago, Richard constructed another four-fifteenth of the office.Last year, he constructed another one-tenth of the office.

What fraction of the office does Richard need to construct this year, in order to finish the project completely?



[2]

[2]



Ana's four dogs collected 80 bones. Dog P woke in the night and ate a half of them, then dog Q woke and ate a quarter of what was left, then dog R woke and ate one-fifth of the rest and finally dog S woke and ate one-sixth of what remained. a) How many bones did dog S eat?

b) How many bones were left in the morning?





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iii) Shape A





Keypoints

 Decimal number is used to mean a number that uses a decimal point followed by digits that show a value smaller than one.
 Example: 48.3 (forty-eight point three) is a decimal number.



- a) Read any whole number parts to the left of the decimal point as you normally would (if any)
- b) Read the decimal point as "and"
- c) Read the number to the right of the decimal point as if it were an ordinary whole number
- d) Finish with the place value name of the rightmost digit (these names all end with "ths")

Examples: 0.94 ninety-four hundredths

8.04 Eight and four hundredths

0.033 thirty-three thousandths





Keywords

a) Decimal		
b) Fractions		
c) Lowest Fractions		
d) Tenths		
e) Hundredths		
f) Thousandths		
g) Whole Number		
h) Decimal Places		
i) Nearest Tenths		
j) Nearest Hundredths		
k) Nearest Thousandths		
l) Nearest Whole Number		







Ref: The Manchester Grammar School, Q8, 11+ Past Paper 2019

6

Complete the following table.

Fraction	%	Decimal
$\frac{1}{2}$		
	25%	
$\frac{1}{8}$		
	10%	
		0.2
$\frac{1}{3}$		

Ref: Hampton Court House, Q9, 11+ Past Paper



[6]



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Practice Questions

A shopkeeper pays £280 for a set of musical instruments.
 He wishes to put a marked price on the set so that, in the forthcoming sale, he will make a profit of 12% on the price paid for the set.
 Find the marked price.



17 Tom bought 25 books and sold them at £5 each. If it has cost £100 for the books, what was his profit or loss percent?







Practice - Past Paper Questions

Mark has a market stall. He sells apples at 56p for each kilogram. Bianca buys 4 kilograms of apples. She pays for her apples with a £5 note.

(a) How much change should she get?



Answer £

Mark bought 25 melons for his stall. He paid £16 for 25 melons.

(b) Work out the price Mark paid for each melon, in pence.

Five of the melons were bad. Mark sold the other 20 for 120p each.

(c) Work out the total amount for which Mark sold the melons.

Answer £

(d) Work out what profit Mark made in selling the melons, giving your answer as a fraction of the cost of buying the melons.

Answer.....

Ref: Merchant Taylors' School, Q26, 11+ Past Paper 2008







Homework

9 The price of all bus tickets to Preston is increased by 20%.
 The price of a bus ticket from London to Preston is increased by £2.80.

Work out the price before this increase.



[2]

Bob sold his car to Jane for £2000. After driving it for a few days, Jane [2] discovered it was in such a broken down condition that she sold it back to Bob for 25% less than she paid. The next week, Bob sold it to John for £1800. What is Bob's profit (in pounds) on final sale?







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