

Number tricks

Evaluate the following multiplications

$0.4 \times 0.002$	$0.00003 \times 0.2$	$0.004 \times 0.0002$
$0.05 \times 0.0004$	$0.00011 \times 0.02$	$0.00023 \times 0.003$
$1.2 \times 0.002$	$24.1 \times 0.002$	$0.0000004 \times 0.0007$

Extension

$0.2 \times 0.3 \times 0.003$	$0.0004 \times 0.2 \times 0.1$
$0.00014 \times 0.3 \times 0.2$	$0.0005 \times 0.11 \times 0.001$

Evaluate the following divisions involving decimals

$0.0004 \div 0.02$	$0.000016 \div 0.008$	$0.0025 \div 0.5$
$0.08 \div 0.0002$	$120 \div 0.00002$	$0.27 \div 0.0000003$

Revision Sheets

Number: No calculator

$-20 \div 5 =$ $-4 \times 100 =$ $-3 \times -12 =$ $100 \div -20 =$ $(-7)^2 =$ $(-2)^3 =$	$3.21 + 1.5 + 0.7$	$3.2 \times 1.8$
$10\% \text{ of } 80 =$ $25\% \text{ of } 60 =$ $20\% \text{ of } 40 =$	$\frac{1}{3} \text{ of } 60 =$ $\frac{1}{4} \text{ of } 80 =$ $\frac{2}{7} \text{ of } 35 =$	$-12 - 8 =$ $-15 + 7 =$ $-20 + 12 =$
Write 36 as the product of its prime factors	<i>20% of a school have brown hairs.</i> There a 102 people with brown hair. How many people in the school are there?	Write down the reciprocal of 12.
Find: $20 \div 0.1 =$ $30 \div 0.2 =$	Paul and Sam share £300 in the ratio 2:3. How much does Paul get?	Peter buys an antique for £40 and sells it for £52. What is his percentage profit?
Round: $4.12 \text{ to } 1 \text{ dp.}$ $3.267 \text{ to } 2 \text{ dp.}$	Exactly a quarter of the school wear glasses. Explain why there cannot be 205 people in the school	Jack travels 60miles between 12.00 and 15.00. What is his average speed?

Number sheets: Fractions

$\frac{2}{5} + \frac{1}{4}$	$3\frac{1}{2} + 2\frac{3}{5}$	$\frac{2}{7} - \frac{1}{21}$
$\frac{3}{7} \div \frac{2}{4}$	$3\frac{1}{5} \times 2\frac{1}{3}$	$5 \div \frac{1}{7}$
$5 \div 3\frac{1}{2}$	$\left(2\frac{1}{2}\right)^2$	$\frac{2}{11} + \frac{1}{3}$
What is the LCM of 11 and 3	What is the LCM of 8, 4 and 12	What is the HCF of 11 and 7

Powers: evaluate the following

$4^2$	$3^2$	$2^3$	$12^2$
$1^7$	$(-4)^2$	$(-3)^2$	$10^4$

Write down the first 5 prime numbers.....

Write down the first 10 square numbers.....

Write down the first 4 cube numbers.....

What is the square number closest to 80?

Using the fact that  $12^2 = 144$ , what does  $1.2^2$  equal?

Using calculations

Find

$170.8 \times 10$	$170.8 \div 10$	$170.8 \times 1000$
$170.8 \div 100$	$170.8 \times 100000$	$170.8 \times 100000$

*YOU ARE TOLD THAT:*       $122 \times 1.4 = 170.8$

Without a calculator, write down the answer to:

$1220 \times 1.4 =$	$12200 \times 1.4 =$
$122 \times 14 =$	$122 \times -1.4 =$
$-122 \times -1.4 =$	$12.2 \times 1.4 =$
$122 \times 2.8 =$	$122000 \times 0.14 =$

DECIMAL MULTIPLICATION:

Use the Grid Method to find:

$3.2 \times 1.4$	$5.1 \times 2.9$
$1.22 \times 3.9$	$326 \times 14$

### Comparing Calculator and Non-Calculator use

Question	Calculator	Question	Non-calculator
Find 12% of 80		Find 14% of 70	
Jack gets 64 out of 80 in a test. What is this as a percentage?		Sam gets 24 out of 40. What is this as a percentage?	
Tim invests some money and it increases in value from £300 to £345. What is the percentage increase?		Sally invests some money. It increases from £400 to £540. What is the percentage increase?	
Jack gets 7 out of 12 in a test. Pete gets 3 out of 5 in a test. Who has done better?		Which is better? A score of 7 out of 10, or a score of 30 out of 30?	
What is $\frac{12}{35}$ as a percentage?		Write $\frac{3}{5}$ as a percentage?	
Find the number half way between $-4.5$ and $1.5$		What number is half-way between $1.2$ and $1.3$	
Increase £300 by 32%		Decrease £200 by 20%.	