KICKSTART EDUCATION

Product: 11+ Mathematics, Week 1

Content: Addition, Subtraction, Multiplication, Division, Place Value and Estimation.

Additional Information:

- This booklet consists of 50 questions, 16 pages.
- Make sure to use units in your answers where necessary.
- Please complete and mark this booklet by the end of the week.
- Mark schemes are accessible via the weekly email.
- Video solutions to each question are accessible via YouTube.
- If you have any questions please Whatsapp us at **07762 189740.**
- This course enforces spaced repetition. The most effective way to learn.

"Spaced out practise, combined with other learning produces better mastery, longer retention and more versatility."

~ Make it Stick: The Science of Successful Learning

kickstart education

7) Give an estimation of the following calculation by rounding each number appropriately.

$$\frac{99 \times 3.01}{60.7 + 38}$$

(3)

8) There are approximately 1.5 billion people living in India. (A billion is a thousand million).

If, on average, 3 people live in each home in India, how many homes are required to house everyone?

(2)

9) Mr Fiat's car alarm flashes every 10 seconds. Approximately (to the nearest 1000) how many times will it flash each day?

(3)

10) What is the closest number to 70,500 that can be made using all of the following five digits: **1**, **6**, **7**, **8** and **9.**

(1)

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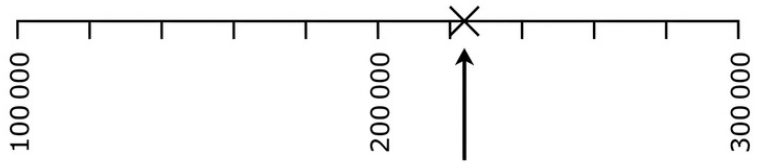
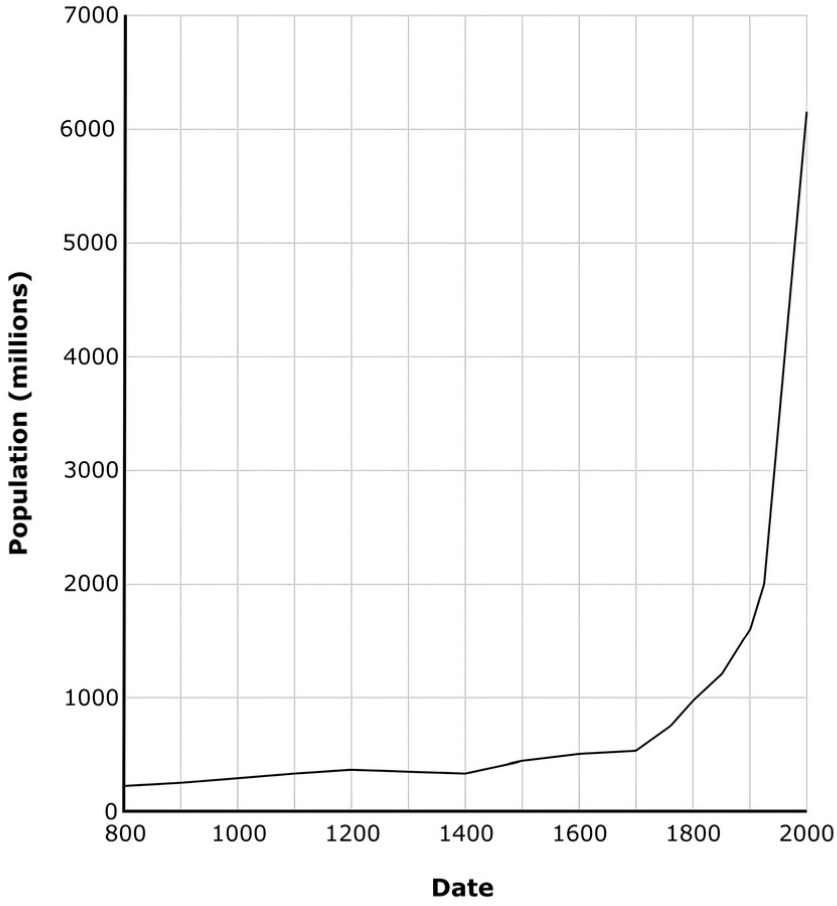
41) Estimate the value represented by the cross to which the arrow is pointing.



(3)

42) The graph shows the population of the world from the year 800 to 2000.



In millions, estimate the population of the world in 1900.

(2)

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USEFUL INFORMATION 1

Conversions:

Fraction	Decimal	Percentage
$\frac{1}{2}$	0.5	50%
$\frac{1}{3}$	0.33	33.33%
$\frac{1}{4}$	0.25	25%
$\frac{1}{5}$	0.2	20%
$\frac{1}{10}$	0.1	10%
$\frac{1}{20}$	0.05	5%
$\frac{4}{10}$	0.4	40%
$\frac{6}{10}$	0.6	60%
$\frac{7}{10}$	0.7	70%
$\frac{8}{10}$	0.8	80%
$\frac{9}{10}$	0.9	90%

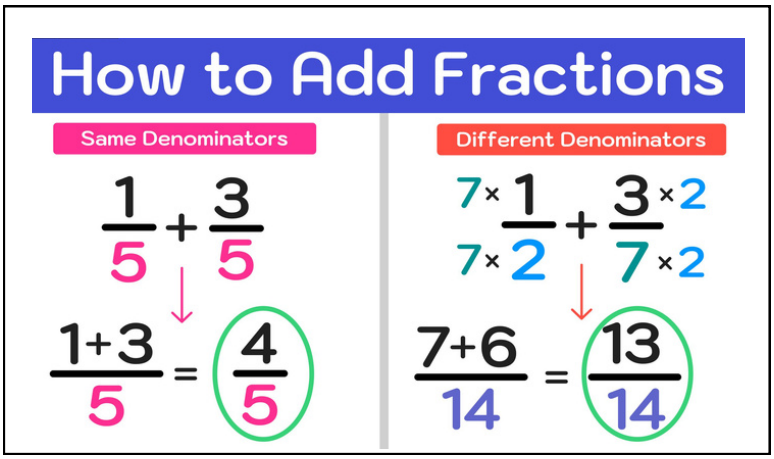
Mixed fraction to an Improper fraction:

$$3\frac{3}{4} = \frac{15}{4}$$

Improper fraction to a Mixed fraction:

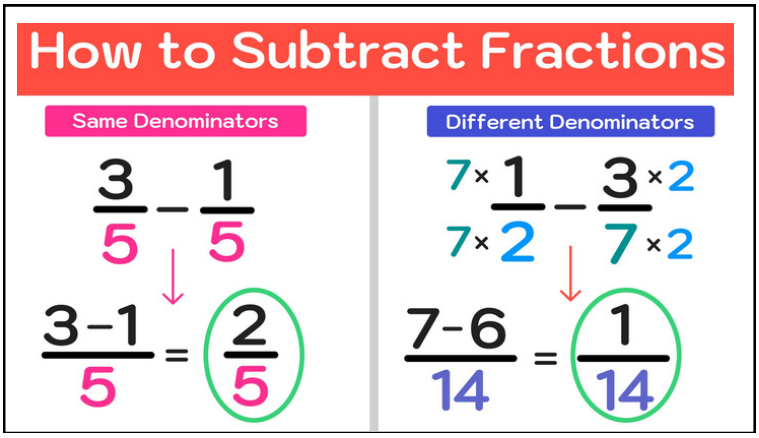
$$\frac{7}{3} = 2\frac{1}{3}$$

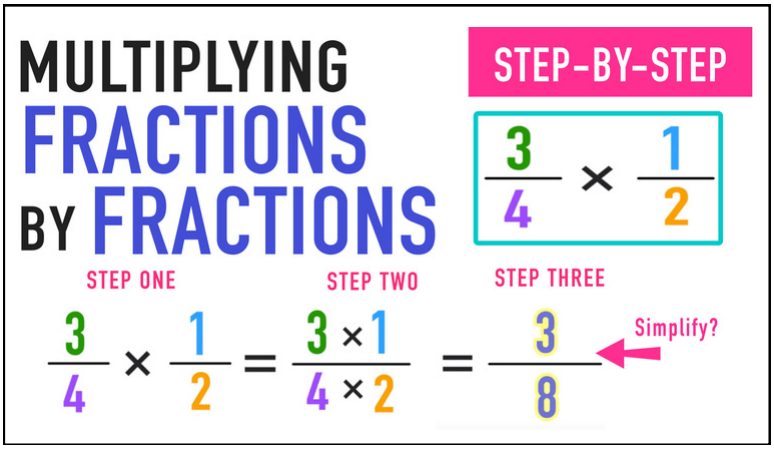
USEFUL INFORMATION 2



SPACE FOR YOUR NOTES ON ADDING FRACTIONS:

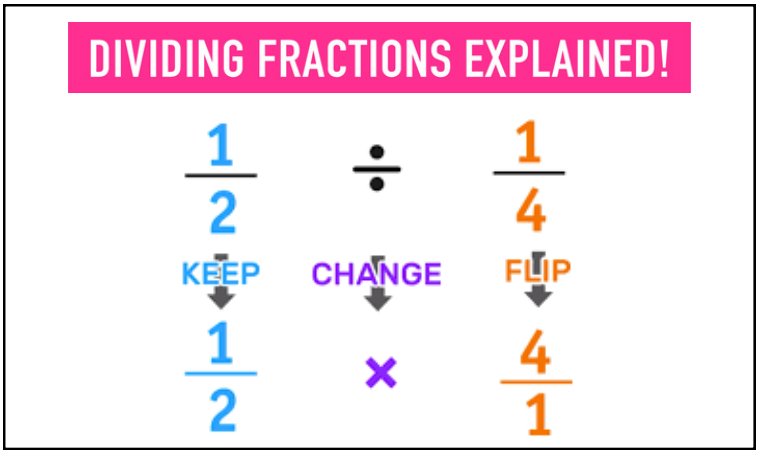
SPACE FOR YOUR NOTES ON SUBTRACTING FRACTIONS:





SPACE FOR YOUR NOTES ON MULTIPLYING FRACTIONS:

SPACE FOR YOUR NOTES ON DIVIDING FRACTIONS:



15) Work out 5% of 20,000. Then work out one-eighth of this answer. Finally, work out 20% of your new answer.

(3)

16) $\frac{4}{5}$ of the books in a library are hardback. The rest of the books are paperback.

If there are 520 paperback books, how many books are there in the library in total?

(2)

17) What percentage of the following numbers are prime numbers?

2 5 9 11 17 23 29 41 49 53

(2)

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To answer the questions in this booklet correctly, use the following order of operations:

Brackets
Indices
Divide
Multiply
Add
Subtract

TIP

Multiplication can be done before division, and subtraction can be done before addition if it makes the equation easier to solve.

Indices

The small floating number that goes next to a number. Indices show how many times a number or letter has been multiplied by itself.

Example

$7^2 \times 7^3$
$(7 \times 7) \times (7 \times 7 \times 7)$

Work out the answers to the following calculations.

1) 5 – 2 x 2

(1)

2) 3 x (6 + 1)

(1)

3) 45 + 12 ÷ 3

(1)

4) (3 + 16) – 6 x 2

(2)

5) 2 x 4 – (5 + 6 ÷ 2)

(2)

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RECAP 1: Number

38) Fill in the missing numbers so that each row, column and diagonal adds up to 15.

2		
4		8

(6)

OPTIONAL EXTENSION QUESTION:
Input the numbers below so that each row, column and diagonal adds to zero.

4 3 2 1 0 -1 -2 -3 -4

39) There are four hundred and fifty-three students in a school. They each have two hundred pounds. How much money do they have altogether?

(2)

40) Sean buys 3 pencils for 35 p each and 7 pens for 65 p each. If he pays with a £10 note, how much change does he recieve?

(2)

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