

Knowledge Organiser - Maths

Key Vocabulary

numerator	the number above the line in a fraction.
denominator	the number below the line in a fraction.
equivalent	equal in value or amount.
fraction	A fraction is a part of a whole number, and a way to split up a number into equal parts.
length	The measured distance from one point to another.
perimeter	Perimeter is the distance around the outside of a shape. Perimeter is found by adding together the length of all a shape's sides.

Key Facts - Length and perimeter

Add and Subtract Lengths

$$14\text{cm} + 19\text{cm} = 33\text{cm}$$

$$8\text{cm } 2\text{mm} + 16\text{mm} = 98\text{mm or } 9\text{cm } 8\text{mm}$$

?
8cm 2mm
16mm
82mm
16mm

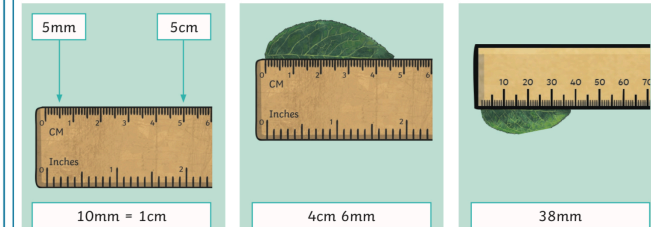
$$6\text{m} - 2\text{m } 28\text{cm}$$

$$6\text{m} - 2\text{m} = 4\text{m}$$

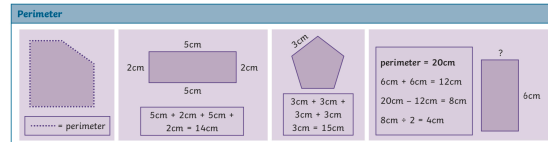
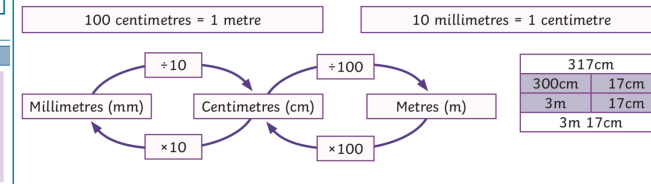
$$4\text{m} - 28\text{cm} = 3\text{m } 72\text{cm}$$

6m
2m 28cm
?

Measure Length



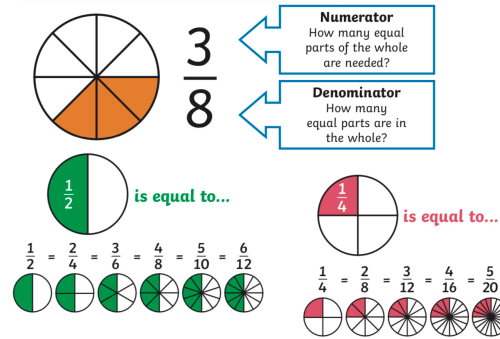
Equivalent Length



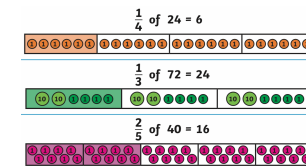
Key Facts - Multiplication

1 Times Table $1 \times 1 = 1$ $1 \times 2 = 2$ $1 \times 3 = 3$ $1 \times 4 = 4$ $1 \times 5 = 5$ $1 \times 6 = 6$ $1 \times 7 = 7$ $1 \times 8 = 8$ $1 \times 9 = 9$ $1 \times 10 = 10$ $1 \times 11 = 11$ $1 \times 12 = 12$	2 Times Table $2 \times 1 = 2$ $2 \times 2 = 4$ $2 \times 3 = 6$ $2 \times 4 = 8$ $2 \times 5 = 10$ $2 \times 6 = 12$ $2 \times 7 = 14$ $2 \times 8 = 16$ $2 \times 9 = 18$ $2 \times 10 = 20$ $2 \times 11 = 22$ $2 \times 12 = 24$	3 Times Table $3 \times 1 = 3$ $3 \times 2 = 6$ $3 \times 3 = 9$ $3 \times 4 = 12$ $3 \times 5 = 15$ $3 \times 6 = 18$ $3 \times 7 = 21$ $3 \times 8 = 24$ $3 \times 9 = 27$ $3 \times 10 = 30$ $3 \times 11 = 33$ $3 \times 12 = 36$	4 Times Table $4 \times 1 = 4$ $4 \times 2 = 8$ $4 \times 3 = 12$ $4 \times 4 = 16$ $4 \times 5 = 20$ $4 \times 6 = 24$ $4 \times 7 = 28$ $4 \times 8 = 32$ $4 \times 9 = 36$ $4 \times 10 = 40$ $4 \times 11 = 44$ $4 \times 12 = 48$	5 Times Table $5 \times 1 = 5$ $5 \times 2 = 10$ $5 \times 3 = 15$ $5 \times 4 = 20$ $5 \times 5 = 25$ $5 \times 6 = 30$ $5 \times 7 = 35$ $5 \times 8 = 40$ $5 \times 9 = 45$ $5 \times 10 = 50$ $5 \times 11 = 55$ $5 \times 12 = 60$	6 Times Table $6 \times 1 = 6$ $6 \times 2 = 12$ $6 \times 3 = 18$ $6 \times 4 = 24$ $6 \times 5 = 30$ $6 \times 6 = 36$ $6 \times 7 = 42$ $6 \times 8 = 48$ $6 \times 9 = 54$ $6 \times 10 = 60$ $6 \times 11 = 66$ $6 \times 12 = 72$
7 Times Table $7 \times 1 = 7$ $7 \times 2 = 14$ $7 \times 3 = 21$ $7 \times 4 = 28$ $7 \times 5 = 35$ $7 \times 6 = 42$ $7 \times 7 = 49$ $7 \times 8 = 56$ $7 \times 9 = 63$ $7 \times 10 = 70$ $7 \times 11 = 77$ $7 \times 12 = 84$	8 Times Table $8 \times 1 = 8$ $8 \times 2 = 16$ $8 \times 3 = 24$ $8 \times 4 = 32$ $8 \times 5 = 40$ $8 \times 6 = 48$ $8 \times 7 = 56$ $8 \times 8 = 64$ $8 \times 9 = 72$ $8 \times 10 = 80$ $8 \times 11 = 88$ $8 \times 12 = 96$	9 Times Table $9 \times 1 = 9$ $9 \times 2 = 18$ $9 \times 3 = 27$ $9 \times 4 = 36$ $9 \times 5 = 45$ $9 \times 6 = 54$ $9 \times 7 = 63$ $9 \times 8 = 72$ $9 \times 9 = 81$ $9 \times 10 = 90$ $9 \times 11 = 99$ $9 \times 12 = 108$	10 Times Table $10 \times 1 = 10$ $10 \times 2 = 20$ $10 \times 3 = 30$ $10 \times 4 = 40$ $10 \times 5 = 50$ $10 \times 6 = 60$ $10 \times 7 = 70$ $10 \times 8 = 80$ $10 \times 9 = 90$ $10 \times 10 = 100$ $10 \times 11 = 110$ $10 \times 12 = 120$	11 Times Table $11 \times 1 = 11$ $11 \times 2 = 22$ $11 \times 3 = 33$ $11 \times 4 = 44$ $11 \times 5 = 55$ $11 \times 6 = 66$ $11 \times 7 = 77$ $11 \times 8 = 88$ $11 \times 9 = 99$ $11 \times 10 = 110$ $11 \times 11 = 121$ $11 \times 12 = 132$	12 Times Table $12 \times 1 = 12$ $12 \times 2 = 24$ $12 \times 3 = 36$ $12 \times 4 = 48$ $12 \times 5 = 60$ $12 \times 6 = 72$ $12 \times 7 = 84$ $12 \times 8 = 96$ $12 \times 9 = 108$ $12 \times 10 = 120$ $12 \times 11 = 132$ $12 \times 12 = 144$

Key Facts - Fractions



Fractions of amounts



whole
halves
thirds
quarters
fifths
sixths
sevenths
eighths
ninths
tenths
elevenths
twelfths

Adding and Subtracting Fractions

$$\frac{5}{6} - \frac{2}{6} = \frac{3}{6}$$

$$\frac{3}{7} + \frac{2}{7} = \frac{5}{7}$$

least or lowest common denominator, LCD

$$\frac{1}{3} + \frac{1}{4}$$

To add or subtract fractions with different denominators we have to convert them so they have the same or common denominator, a number that they will both divide into evenly.

finding the LCD

Step 1 Work out the multiples for each denominator.

3 → 3, 6, 9, 12, 15 4 → 4, 8, 12, 16, 20

Step 2 Then it's easy to see the least or lowest common denominator (multiple). 12

Step 3 Convert your fraction to its equivalent using the lowest common denominator (multiple). Don't forget to multiply the top AND the bottom

1/3 → 4/12 1/4 → 3/12

Step 4 Add your equivalent fractions. You now have the answer.

$$\frac{4}{12} + \frac{3}{12} = \frac{7}{12} \text{ or } \frac{1}{3} + \frac{1}{4} = \frac{7}{12}$$