



YEAR 4: MATHEMATICS Knowledge Mat



Place Value

Count in 6s, 7s, 9s, 25s and thousands both forwards and backwards including negative numbers.

Example

Complete these sequences:

9 0 -9 -18

4000 3000 1000 -1000

Count in hundredths and recognise that hundredths arise when dividing 1 digit numbers by 100.

Example

Continue counting in hundredths:

1.57 1.58

Place Value

Read, write, compare and order numbers up to ten thousand (knowing the value of each digit)

Example

Order these numbers

1423 1234 1324 1342

smallest largest

Read, Roman numerals to 100.

Place Value

Round to the nearest 10, 100, 1000 and decimals (1 decimal place) to the nearest whole.

Example

Dwayne weighed out 2067 grams of sand on his weighing scales.

To the nearest thousand, how many grams was this?

Addition and Subtraction

Add and subtract numbers with up to 4 digits using the column method.

Example

Artek collected 3056 leaves into a recycling bin in the playground. The wind blew 178 leaves out of the bin. Artek then collected another 264 leaves into the bin.

How many leaves were in the bin then?

Addition and Subtraction

Solve 2-step problems by deciding which operation to use and why.

Example

Mr Print, the newsagent, has 56 newspapers to sell. He sells 37 newspapers to customers. Another 48 newspapers are delivered to the shop.

How many newspapers are in the shop now?

Multiplication and Division

Rapid recall of multiplication and division facts to 12×12 .

Example

Complete these:

$11 \times 11 = \square$ $120 \div 12 = \square$

$132 \div 11 = \square$ $9 \times 12 = \square$

Multiply 2-diti and 3-digit numbers by a 1-digit number using formal written methods.

Statistics

Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.

Example

	Bus A	Bus B	Bus C
Amber Alley	08:30	08:45	09:00
Silver Street	09:05	09:20	09:35
Red Road	09:20	09:35	09:50

You need to meet your mum on Red Road by 9:40.

Which bus should you catch from Silver street?

Measurement: Converting Units

Read, write and convert time between analogue and digital 12 and 24 hour clocks.

Example

Time	Digital 12 hour clock time	Digital 24 hour clock time
quarter past 2 in the afternoon	2:15 pm	14:15
half past 8 in the morning		
twenty five past 11 in the morning		





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Fractions

Add and subtract fractions with the same denominator.

Example

Complete these fraction sums:

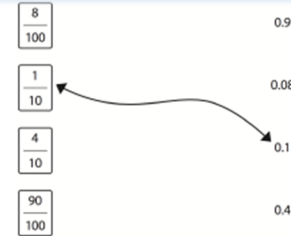
$$\frac{4}{18} + \frac{3}{18} = \frac{\boxed{}}{18} \quad \frac{14}{19} - \frac{6}{19} = \frac{\boxed{}}{19}$$

Fractions and Decimals

Recognise and show equivalent fractions (including decimal equivalents)

Example

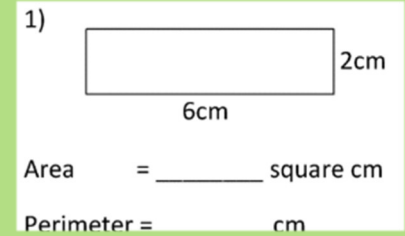
Match the fractions to their decimal equivalent, the first one has been completed.



Measurement: Perimeter and Area

Calculate the perimeter and area of basic shapes.

Example



Shape: Position and Direction

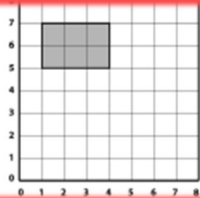
Describe positions on a 2D grid as coordinates and describe their movements in units left/right and up/down.

Example

Translations

Can this rectangle be translated to these coordinates?

(4,3) (7,3) (4,4) (7,4)

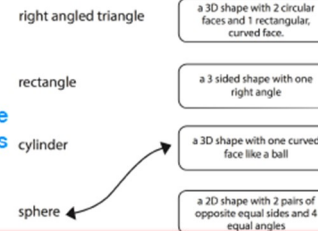


Shape

Compare and classify shapes based on their properties.

Example

Match the shape to the descriptions



Measurement: Converting Units

Convert between different units of measure (mm to cm to m to km, ml to l, g to kg)

Example

In a can there is approximately _____ of lemonade.

Circle the best answer

30 litres

3 litres

0.3 litres

Shape: Position and Direction

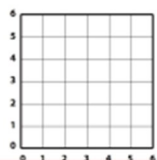
Plot polygons using coordinates given.

Example

Plot these coordinates:

(2,1) (5,3) (5,5) (1,4)

What is the shape?



Shape

Identify lines of symmetry and compare angles.

Example

Draw one line of symmetry on these shapes:



Sort these angles into size order:

