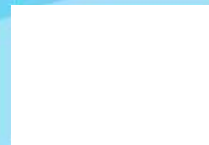


Maths

Addition, Subtraction,
Multiplication and Division

Players, Are You Ready?



Aim

- I can perform mental calculations with increasingly large numbers using all four operations.

Success Criteria

- I can partition into thousands, hundreds, tens, ones and tenths, adding the most significant digit first.
- I can add or subtract the nearest multiple of ten or 100, then adjust.
- I can identify near doubles.
- I can multiply or divide by four or eight by repeated doubling or halving.
- I can form an equivalent calculation.

How Much?



Look at your Target Decimal Board.

Target P

I can perform mental

5.6

16.65

4.765

3.235

9.4

3.87

32

238

The smallest whole number.

The highest whole number.

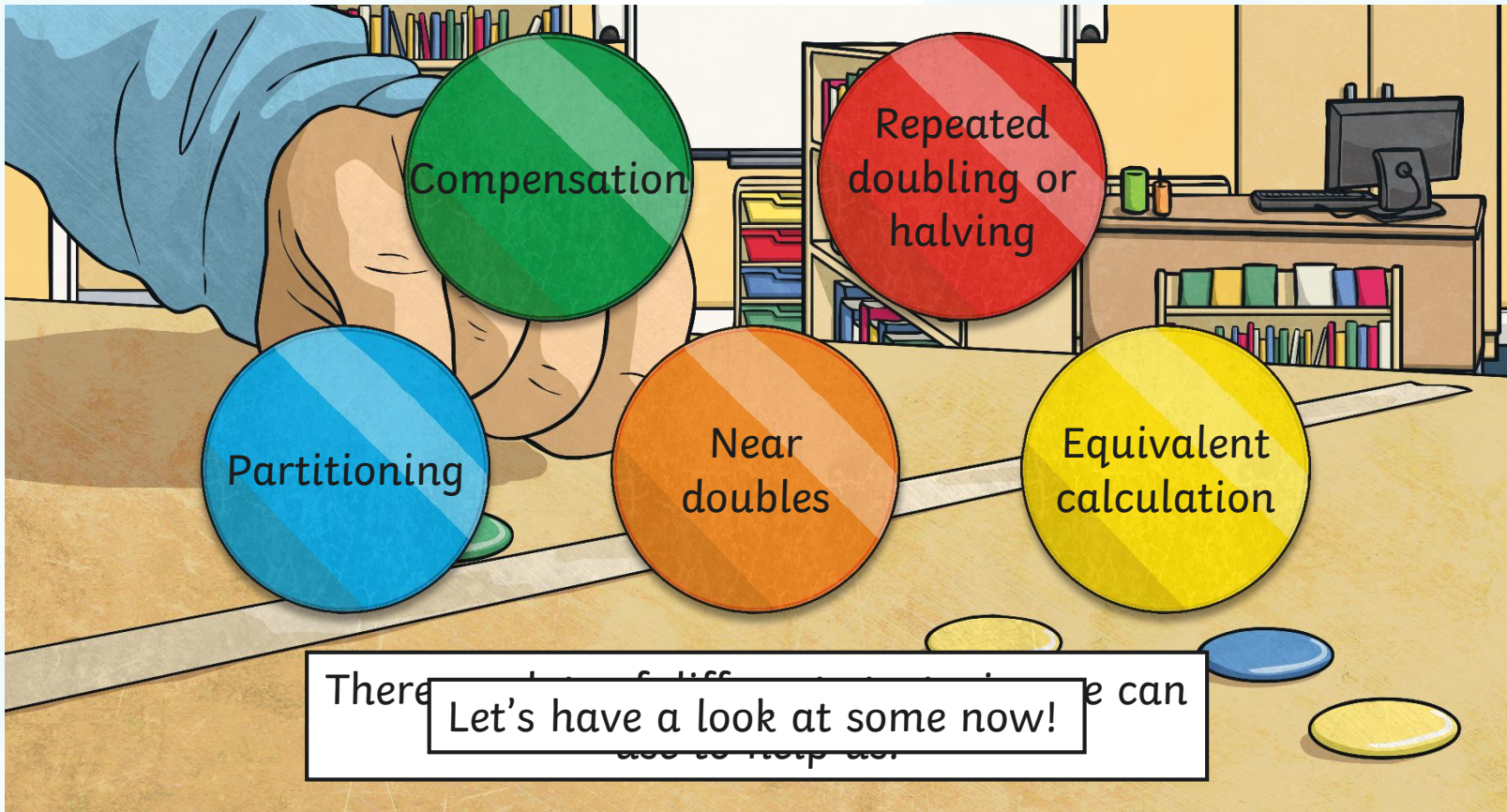
The number closest to 100.

The smallest number with 3 decimal places.

Add or subtract at least 2 numbers to create:

Practice Round

Some calculations we can do in our head mentally. We can write notes to help us remember key numbers while working out the answer.



Practice Round

Which strategy will be most useful when completing this calculation?

So add the hundreds first
To make this easier to
 $385.6 + 200 = 585.6$
work out, we can use the
Then add the tens.
method of partitioning.
 $585.6 + 50 = 635.6$

Add the ones.
This involves partitioning
 $635.6 + 4 = 639.6$
into hundreds, tens, ones
Lastly, add the tenths.
and tenths, adding the
 $639.6 + 0.5 = 640.1$
hundreds first.
The answer is 640.1

Repeated
doubling or
halving

Compensation

$$385.6 + 254.5 = 640.1$$

Practice Round

Which strategy will be most useful when completing this calculation?

Subtract the hundreds first

We can use partitioning

Then subtract the tens

$$562 - 40 = 522$$

Next, subtract the ones into hundreds, tens, ones

Lastly, subtract the tenths the hundreds first.

The answer is 518.5.

Repeated doubling or halving

Compensation

$$962 - 443.5 = 518.5$$

Practice Round

Which strategy will be most useful when completing this calculation?

The nearest multiple of ten to 1459 is 1460. This is one To make this easier to work out, we can use a method We can also adjust our answer to make up for the difference between the two numbers. We can add 1 to 1460 to get 1461, then subtract 1 to get 1459. This is a good method to use when working with large numbers.

$$1460 - 1 = 1459$$

$$1459 + 87 = 1546$$

Repeated doubling or halving

Compensation

Practice Round

Which strategy will be most useful when completing this calculation?

So the nearest multiple of 100 to 104 is 100. This is four less than 104.

~~We can also use~~

We then ~~added to our~~ answer ~~subtracting~~ for the four ones that we didn't

~~This is a subtraction to the nearest multiple of 100 or from the answer.~~

$$545 - 4 = 541$$

$$645 - 104 = 541$$

Repeated doubling or halving

Compensation

Practice Round

Which strategy will be most useful when completing this calculation?

Double 170.1.
To make this easier to work
out, we need to halve it, so
we need to double 64.5
not 170.1. Therefore we
This involves doubling then
adjusting.

$$340.2 - 5.6 = 334.6$$

Repeated
doubling or
halving

Compensation

$$164.5 + 170.1 = 334.6$$

Practice Round

Which strategy will be most useful when completing this calculation?

15.5 x 2 is the same as
If we double this answer, it
~~will double the answer~~
If we double this answer, it
~~will double the answer~~
So 15.5 x 8 = 124
Double 31 = 62

Repeated doubling or halving

Compensation

15.5 x 8 = 124

Practice Round

Which strategy will be most useful when completing this calculation?

$42 \div 2$ is the same as halving 42.

Half of 42 = 21
We can use repeated halving to solve this. If we halve this answer, it will be equivalent to calculation.
 $42 \div 4$.

Half of 21 = 10.5
So $42 \div 4 = 10.5$

$$42 \div 4 = 10.5$$

Repeated doubling or halving

Compensation

Practice Round

Which strategy will be most useful when completing this calculation?

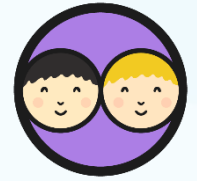
We can use equivalent calculations to solve this:
Double 31.5 is 63
 $63 \times 10 = 630$
So 31.5 \times 20 = 630
doubling, then multiply by ten.

Repeated doubling or halving

Compensation

$$31.5 \times 20 = 630$$

Players, Are You Ready?



Which mental method would you use to find the answer to the question?

$$583.35 + 294.49 =$$

Partitioning

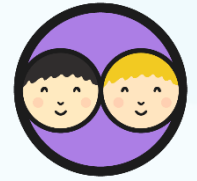
Compensation

Near
doubles

Repeated
doubling or
halving

Equivalent
calculation

Players, Are You Ready?



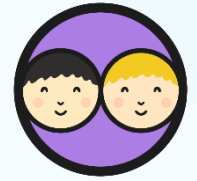
Which mental method would you use to find the answer to the question?

583 + 593 =

Partitioning Compensation Near doubles Repeated doubling or halving Equivalent calculation

The illustration shows a boy on the left and a girl on the right standing in front of a whiteboard. The whiteboard displays the addition problem 583 + 593 =. Below the whiteboard are five colored circles, each containing a mental math strategy: Partitioning (blue), Compensation (green), Near doubles (orange), Repeated doubling or halving (red), and Equivalent calculation (yellow).

Players, Are You Ready?



Which mental method would you use to find the answer to the question?

56.4 × 4 =

Partitioning

Compensation

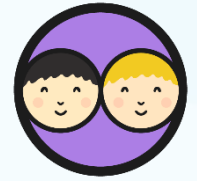
Near doubles

Repeated doubling or halving

Equivalent calculation

The illustration shows a boy on the left and a girl on the right standing in front of a whiteboard. The whiteboard displays the multiplication problem $56.4 \times 4 =$. Below the whiteboard are five colored circles, each containing a mental calculation method. The boy is holding the blue and green circles, and the girl is holding the yellow circle.

Players, Are You Ready?



Which mental method would you use to find the answer to the question?

$190 \div 5 =$

Partitioning

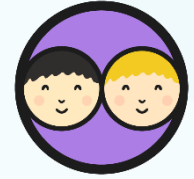
Compensation

Near doubles

Repeated doubling or halving

Equivalent calculation

Four-in-a-Row



In pairs, take turns to select a calculation to complete.



The first player to get four in a row wins!

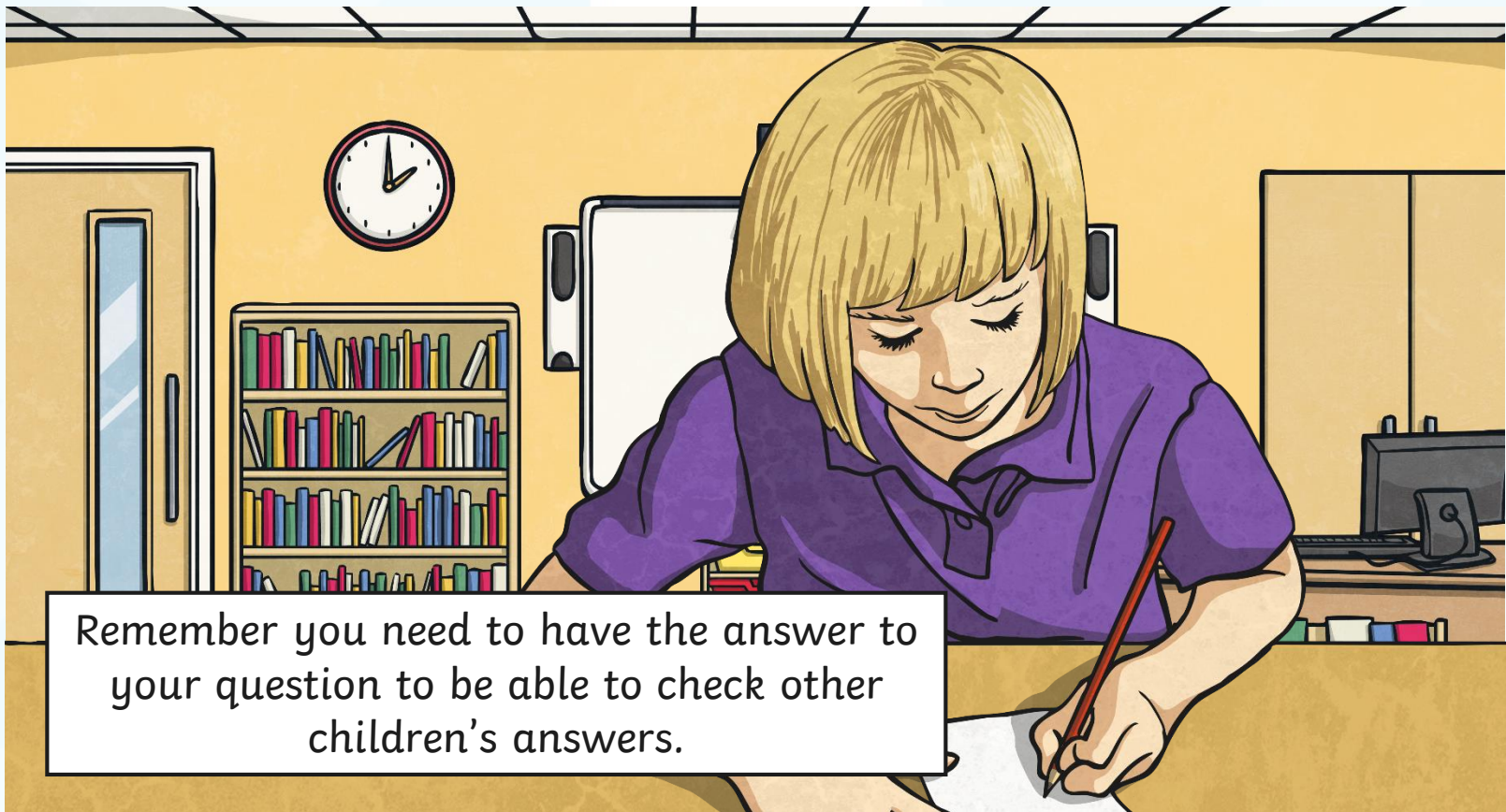
Mental Calculations Four-in-a-Row Game

$6 \times 18 + 17$	$675 - 239 =$	$583 - 300 =$	$99 \times 2 =$	$4652 \div 10 =$	$32 \times 4 =$	$32.3 \div 10 =$	$234.5 \div 230.8 =$
$45 \div 2 = 29$	$901 \div 214 =$	$399 + 483 =$	$15.6 + 15.9 =$	$= 328 \times 2$	$64 \div 4 =$	$+ 135.7 + 683.7$	$50 \times 8 =$
$84 \div 16 = 50$	$56.44 - 26.01 =$	$- 989 - 482$	$73 \times 4 =$	$+ 120 \div 4$	$15 \times 20 =$	$28.7 - 16.5 =$	$56.7 \div 94 =$
$244 \div 10 = 4$	$35.56 - 74.31 =$	$+ 2.9 \div 2.8$	$529 \div 295 =$	$5833 \div 100 =$	$74.9 - 22.5 =$	$413 \div 10 =$	$+ 315 \div 5$
$65 \div 66 = 10$	$82 \div 4 =$	$796 - 357 =$	$+ 636 - 294$	$+ 482 - 205$	$80 \div 4 =$	$25 \div 4 =$	$+ 23 \div 20$
$12 \div 4 = 43$	$583.23 \div 100$	$205 - 139 =$	$392 \div 492 =$	$- 21 \div 8$	$+ 492 \div 505$	$56.6 - 25.6 =$	$+ 295 \div 5$

Calculation Countdown



Write three questions for the rest of the class to answer.



Remember you need to have the answer to your question to be able to check other children's answers.

Aim



- I can perform mental calculations with increasingly large numbers using all four operations.

Success Criteria

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