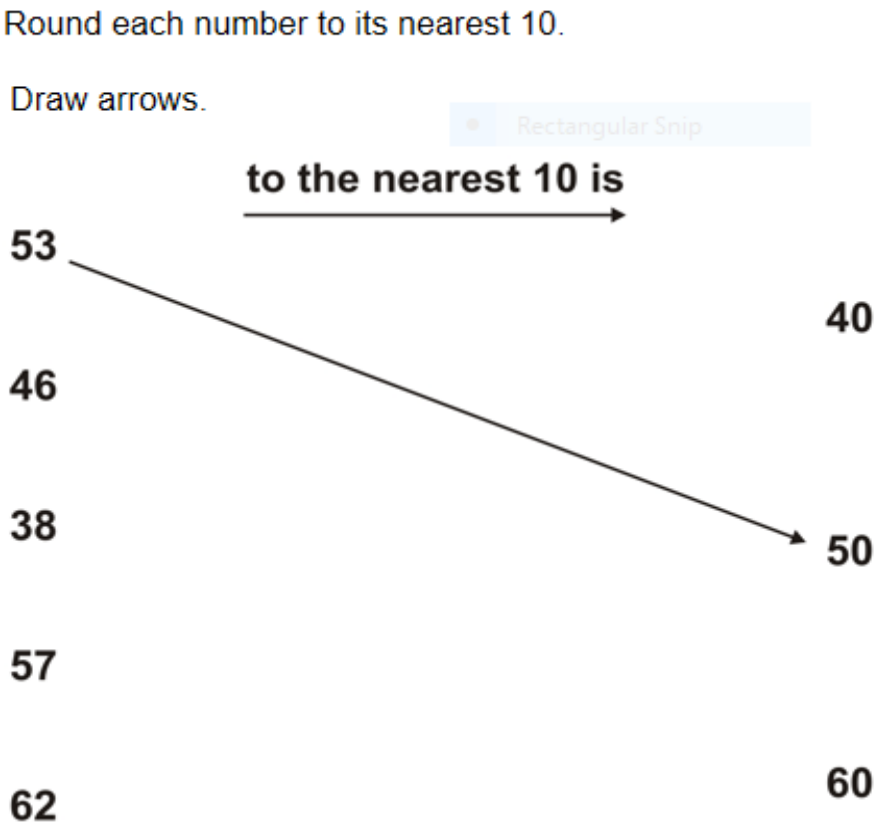
Reasoning Activity – Rounding

There are video tutorials and lessons for your child to watch and follow, before completing each activity.

- Place value explanation click HERE
- Rounding rules explanation click HERE
- Click this link to learn a Rounding Song with Laura Bubble on BBC

P4L



Warming up*

Q1.

Which of these numbers give **80** when **rounded** to the **nearest 10**?

Circle all the correct numbers.

84 87 72 76 90

Q2.

Round the following numbers.

540 to the nearest 100 ☐

236 to the nearest 10 ☐

$1\frac{3}{4}$ to the nearest whole number ☐

Q3.

Amy chooses two of these cards.

11	23	33	43

She adds the numbers on her two cards together.
She rounds the result to the nearest 10

Her answer is 60

Which two cards did Amy choose?

☐ and ☐

Q4.

Round each number in a box to the nearest 100

One is done for you.

Feeling more confident **

Q1.

Circle the number **nearest to 1000**

1060 **1049** **1100** **960** **899**

Q2.

Complete the table.

Number	Rounded to nearest 1000	Rounded to nearest 100 000
385 704		400 000
809 601		

Q3.

Lara chooses a **square number**.

She rounds it to the nearest hundred.

Her answer is 200

Write **all** the possible square numbers Lara could have chosen.

.....

Q4.

The **difference** between two numbers is 2

When each number is rounded to the nearest hundred, the difference between them is 100

Write what the two numbers could be.

and

Ready for a challenge. ***

Q1.

Chen chooses a **prime** number.

He multiplies it by 10 and then rounds it to the nearest hundred.

His answer is **400**.

Write **all** the possible prime numbers Chen could have chosen.

Q2.

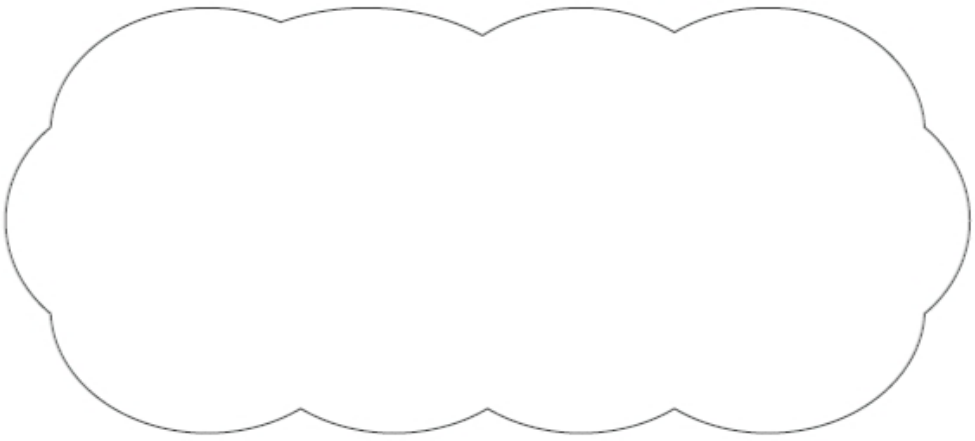
Runa nd Jon each start with the same number.

Runa rounds the number to the nearest hundred.

Jon rounds the number to the nearest ten.

Runa's answer is double Jon's answer.

Explain how this can be.



Q3.

Dev thinks of a **whole** number.

He multiplies it by 4

He rounds his answer to the nearest 10

The result is 50

Write **all** the possible numbers that Dev could have started with.

_____

2 marks

Answers

P4L

2 marks for all correct or 1 mark for any 2 correct.

Warming up*

Q1.

Two numbers circled as shown:

84 87 72 **76** 90

Do not *award the mark if additional incorrect numbers are circled.*

Accept alternative unambiguous indications, eg ticks, numbers crossed or underlined.

Q2.

Award **TWO** marks for three numbers correct as shown:

500
240
2

If the answer is incorrect, award **ONE** mark for any two numbers correct.

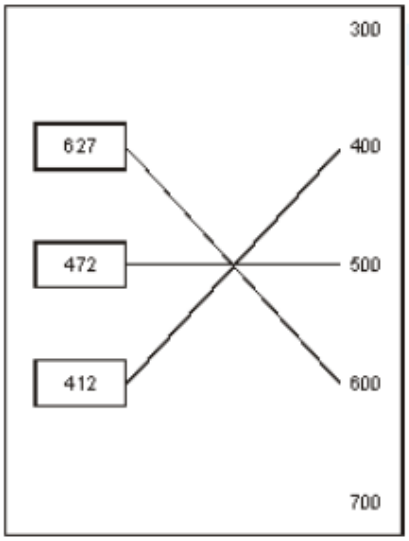
Q3.

23 **AND** 33

Numbers may be given in either order.

Q4.

The two numbers matched correctly as shown:



Both *lines must be drawn correctly for the award of the mark.*

Lines need not touch the boxes or numbers exactly, provided the intention is clear.

Do not *accept two or more lines drawn from the same left-hand box.*

Feeling more confident **

Q1.

1060 1049 1100 **960** 899

Accept alternative indications, eg the number crossed or underlined.

Q2.

All three numbers correct or any two correct

Number	Rounded to nearest 1000	Rounded to nearest 100 000
385 704	386 000	400 000
809 601	810 000	800 000

or

Any two correct

Q3.

Award **TWO** marks for all three numbers, as shown:

169 **AND** 196 **AND** 225

Accept numbers written in any order.

*All three numbers and no incorrect numbers must be given for the award of **TWO** marks.*

*Accept for **TWO** marks:*

- *13^2 **AND** 14^2 **AND** 15^2*

OR

- *13 × 13 **AND** 14 × 14 **AND** 15 × 15*

If the answer is incorrect, award **ONE** mark for:

- two numbers correct and none incorrect

OR

- three numbers correct and one incorrect.

*Accept for **ONE** mark:*

*13 **AND** 14 **AND** 15*

Q4.

Two numbers with a difference of 2, in the range 48 **inclusive** to 52 **exclusive** eg:

- 48 **AND** 50

OR

- 51.9 **AND** 49.9

OR

any pair of numbers that differ from those above by a multiple of 100 and have a difference of 2, eg:

- 149 **AND** 151

OR

- 648 **AND** 650

Numbers can be given in either order.

Ready for a challenge ***

Q1.

Gives only the three correct prime numbers in any order, ie:

- 37, 41, 43

or

Gives at least two correct prime numbers **and**
not more than one incorrect number, eg:

- 37, 39, 41, 43
- 39, 41, 43
- 41, 43

Q2.

Gives a correct explanation with a number x such that $50 \leq x < 55$, or $-5 < x < 5$, as an example, eg:

- 53 to the nearest hundred is 100, and to the nearest ten is 50 and 2 × 50 = 100
- If it's 50 or more but less than 55 it will round to 100 (nearest hundred) and 50 (nearest ten) and 100 is double 50
- 0 is 0 to the nearest 100 and 0 to the nearest 10 and twice 0 is 0

Accept minimally acceptable explanation, eg:

- *51 rounds to 50 and 100*
- *54 → 50 and 54 → 100*
- *50 rounds to 100*
- *0 rounds to 0*

***Do not accept** incomplete or incorrect explanation, eg:*

- *They used 51*
- *50 × 2 = 100*
- *They could use between 50 and 55, which round to 100*

Q3.

Award **TWO** marks for 12 **AND** 13

If the answer is incorrect, award **ONE** mark for:

- only one correct number and no incorrect number

OR

- 12 **AND** 13 **AND** not more than one incorrect number.

*Accept for **ONE** mark an answer of 48 **AND** 52 **AND** no more than one incorrect number.*

Up to 2m

[2]