1 a) Tick the cards that round to 8 to the nearest integer.

| 7.8 | 8.1 | 7.5 | 8.15 |

| 7.125 | 8.05 | 8.5 | 7.49 |

b) Tick the cards that round to 6.1 to 1 decimal place.

| 6.14 | 6.04 | 6.15 | 6.049 |

| 6.123 | 6.099 | 6.149 | 6.05 |

c) Tick the cards that round to 4,000 to 1 significant figure.

| 3,099 | 3,599 | 3,500 | 3,500.1 |

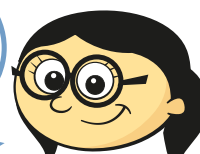| 4,099 | 4,499 | 4,500 | 4,501 |

2 Eva and Annie each think of a number.
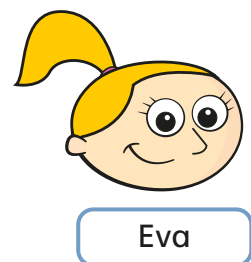
Eva: When I round my integer to the nearest 10, I get the answer 40

Annie: My number is not an integer, but mine also rounds to 40 to the nearest 10

a) What is the smallest number Eva could be thinking of?

b) What is the greatest number Eva could be thinking of?

c) Complete the sentence.

Eva's number is between [ ] and [ ]

Are the answers the same for Annie's number?

3 The table shows how eggs are categorised by mass.

Egg size	Mass (g)
very large	$m > 73$
large	$63 < m \leq 73$
medium	$53 < m \leq 63$
small	$m \leq 53$

a) What is the size of an egg that weighs 72 g? _____

b) What is the size of an egg that weighs 63 g? _____

c) What is the maximum mass of a small egg?

4 Write these intervals in words.

The first one has been done for you.

$1 < x \leq 5$ x is greater than 1 but less than or equal to 5

$1 \leq x < 5$ _____

$1 < x < 5$ _____

$3.5 < x \leq 4.5$ _____

5 In a school, there are 200 students in Year 7 and 300 students in Year 8

Both numbers are correct to 1 significant figure.

Work out the greatest and smallest possible total number of students in Years 7 and 8

greatest possible number = [ ]

smallest possible number = [ ]

6 Tick the interval that matches each statement.

a) $x = 8$ to the nearest integer

| $7.5 < x < 8.5$ | $7.5 < x \leq 8.5$ | $7.5 \leq x \leq 8.5$ | $7.5 \leq x < 8.5$ |

$x = 8.0$ to 1 decimal place

| $7.5 < x < 8.5$ | $7.5 < x \leq 8.5$ | $7.95 \leq x < 8.05$ | $7.5 \leq x \leq 8.05$ |

b) the length of the book, l, is 20 cm to the nearest centimetre

| $19.5 \leq l < 20.5$ | $19.5 < l \leq 20.5$ | $19 < l < 21$ | $19.5 \leq l \leq 20.5$ |

the length of the book, l, is 20 cm to the nearest 10 cm

| $10 \leq l < 30$ | $15 < l \leq 25$ | $10 < l < 25$ | $15 \leq l < 25$ |

c) $p = 3$ to 1 significant figure

| $2 < p < 4$ | $2.5 \leq p < 3.5$ | $2.5 < p \leq 3.5$ | $2.5 \leq p \leq 3.5$ |

$p = 30$ to 1 significant figure

| $25 < p < 35$ | $29.5 < p \leq 30.5$ | $25 \leq p < 35$ | $29.5 \leq p < 30.5$ |

7 Complete the error intervals for each statement.

$a = 16$ to the nearest whole number

$\boxed{} \leq a < \boxed{}$

$b = 10$ to the nearest whole number

$\boxed{} \leq b < \boxed{}$

$c = 600$ to the nearest 100

$\boxed{} \leq c < \boxed{}$

$d = 6,000$ to the nearest 1,000

$\boxed{} \leq d < \boxed{}$

$e = 6,000$ to the nearest 100

$\boxed{} \leq e < \boxed{}$

$f = 6,000$ to the nearest 10

$\boxed{} \leq f < \boxed{}$

$g = 6,000$ to the nearest integer

$\boxed{} \leq g < \boxed{}$

8 Brett and Tom have given these error intervals for the number m.

Brett

$23.5 \leq m < 24.5$

Tom

$24.5 > m \geq 23.5$

Brett thinks their answers are the same.

Do you agree with Brett? _____

Explain your answer.

_____

_____

9 Write a possible statement to match each error interval.
The first one has been done for you.

a) $3.75 \leq h < 3.85$ $\quad$ <u>$h = 3.8$ to 1 decimal place</u>

b) $11.5 \leq p < 12.5$ _____

c) $105 \leq q < 115$ _____

d) $7,950 \leq m < 8,050$ _____

e) $0.005 \leq t < 0.015$ _____