FOUNDATION & HIGHER

SAME AT BOTH TIERS

Name ..... Class .....

N15: Rounding and error intervals

Decimal places, significant figures and error intervals from rounding or truncation

20 marks · 25 minutes · Non-calculator

1) Round 3.4762 to

(a) 1 decimal place

.....

(1)

(b) 2 decimal places

.....

(1)

(c) 3 significant figures

.....

(1)

[Question 1: 3 marks]

2) Round 0.006049 to 2 significant figures.

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[Question 2: 1 marks]

3) Round 48 652 to

(a) 2 significant figures

.....

(1)

(b) the nearest 100

.....

(1)

[Question 3: 2 marks]

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4) A length is 7.3 cm, correct to 1 decimal place. Write down the error interval for the length, l cm.

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[Question 4: 2 marks]

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5) A mass is 250 g, correct to the nearest 10 g. Write down the error interval for the mass, m g.

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[Question 5: 2 marks]

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6) A number, x, is truncated to 1 decimal place. The result is 4.6. Write down the error interval for x.

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[Question 6: 2 marks]

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7) The number of people at a match is 3400, to the nearest 100. Write down the error interval for the number of people, n.

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[Question 7: 2 marks]

8) Round 199.96 to 1 decimal place.

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[Question 8: 1 marks]

9) Truncate 8.6729 to 2 decimal places.

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[Question 9: 1 marks]

10) A time is 12.8 seconds, correct to 3 significant figures. Write down the error interval for the time, t seconds.

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[Question 10: 2 marks]

11) Round 0.04999 to 3 significant figures.

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[Question 11: 1 marks]

12) Round 2.6 million to 1 significant figure.

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[Question 12: 1 marks]

End of paper – 20 marks in total

Answers and brief mark scheme

Q	Answer	Method / notes
1	(a) 3.5 (b) 3.48 (c) 3.48	B1 each.
2	0.0060	B1 (zero needed).
3	(a) 49 000 (b) 48 700	B1 each.
4	$7.25 \leqslant l < 7.35$	B1 each end.
5	$245 \leqslant m < 255$	B1 each end.
6	$4.6 \leqslant x < 4.7$	B1 each end.
7	$3350 \leqslant n < 3450$	B1 each end (accept $\leqslant 3449$).
8	200.0	B1.
9	8.67	B1.
10	$12.75 \leqslant t < 12.85$	B1 each end.
11	0.0500	B1.
12	3 million	B1.