

Name: _____

GCSE (1 – 9)

Error Intervals

Instructions

- Use **black** ink or ball-point pen.
- Answer all questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all your working out.**

Information

- The marks for each question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end

1 The weight of a bag of potatoes is 15 kg, correct to the nearest kg.

(a) Write down the smallest possible weight of the bag of potatoes.

14.5 kg
.....kg
(1)

(b) Write down the largest possible weight of the bag of potatoes.

15.5 kg
.....kg
(1)

(Total for question 1 is 2 marks)

2 The length of a line is 81 centimetres, correct to the nearest centimetre.

(a) Write down the least possible length of the line.

80.5 cm
.....cm
(1)

(b) Write down the greatest possible length of the line.

81.5 cm
.....cm
(1)

(Total for question 2 is 2 marks)

3 The height of a building is measured as 11 metres, correct to the nearest metre.

(a) Write down the least possible height of the building.

10.5 m
.....m
(1)

(b) Write down the greatest possible height of the building.

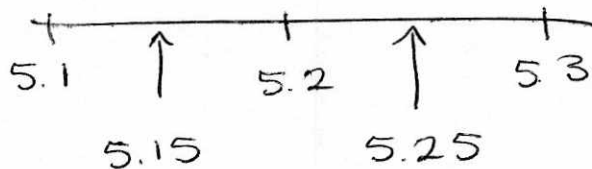
11.5 m
.....m
(1)

(Total for question 3 is 2 marks)

4 A number y is rounded to 1 decimal place.

The result is 5.2

Write down the error interval for y .



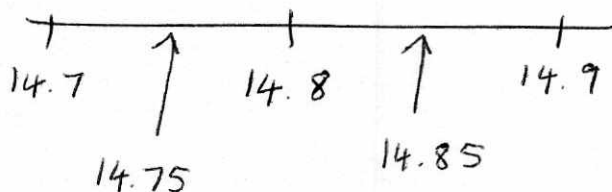
$$\underline{5.15} \leq y < \underline{5.25}$$

(Total for question 4 is 2 marks)

5 A number y is rounded to 1 decimal place.

The result is 14.8

Write down the error interval for y .



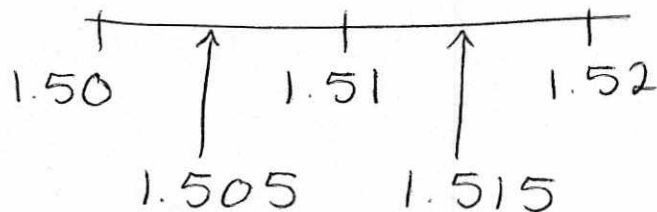
$$\underline{14.75} \leq y < \underline{14.85}$$

(Total for question 5 is 2 marks)

6 A number y is rounded to 2 decimal places.

The result is 1.51

Write down the error interval for y .



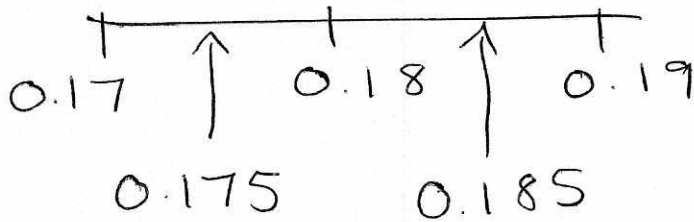
$$\underline{1.505} \leq y < \underline{1.515}$$

(Total for question 6 is 2 marks)

7 A number x is rounded to 2 decimal places.

The result is 0.18

Write down the error interval for x .



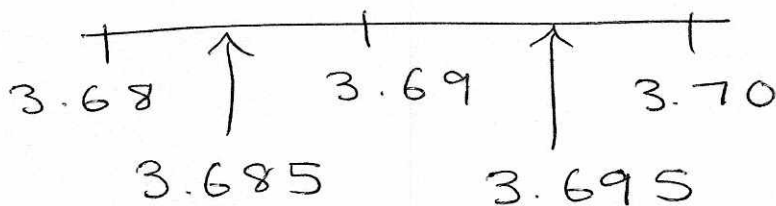
$$\underline{0.175} \leq x < \underline{0.185}$$

(Total for question 7 is 2 marks)

8 A number x is rounded to 3 significant figures.

The result is 3.69

Write down the error interval for x .



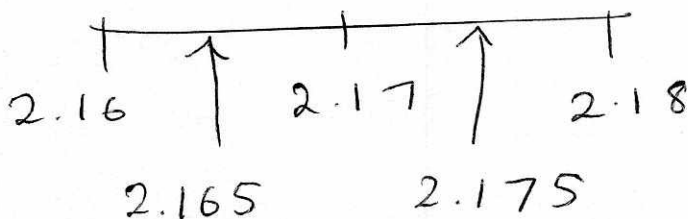
$$\underline{3.685} \leq x < \underline{3.695}$$

(Total for question 8 is 2 marks)

9 A number x is rounded to 3 significant figures.

The result is 2.17

Write down the error interval for x .



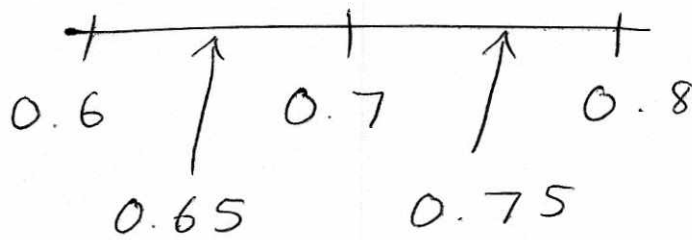
$$\underline{2.165} \leq x < \underline{2.175}$$

(Total for question 9 is 2 marks)

10 A number y is rounded to 1 decimal place.

The result is 0.7

Write down the error interval for y .



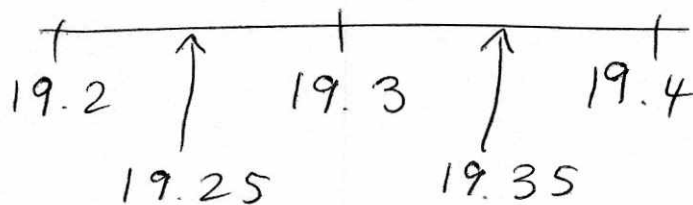
$$\underline{0.65 \leq y < 0.75}$$

(Total for question 10 is 2 marks)

11 A number y is rounded to 1 decimal place.

The result is 19.3

Write down the error interval for y .



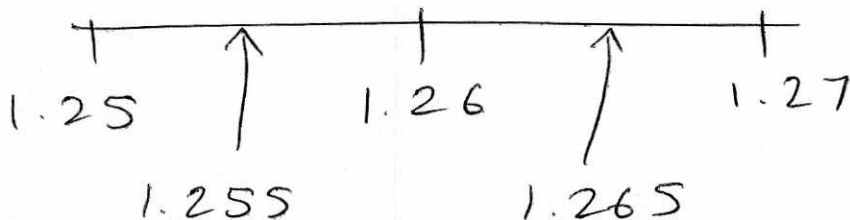
$$\underline{19.25 \leq y < 19.35}$$

(Total for question 11 is 2 marks)

12 A number y is rounded to 2 decimal places.

The result is 1.26

Write down the error interval for y .



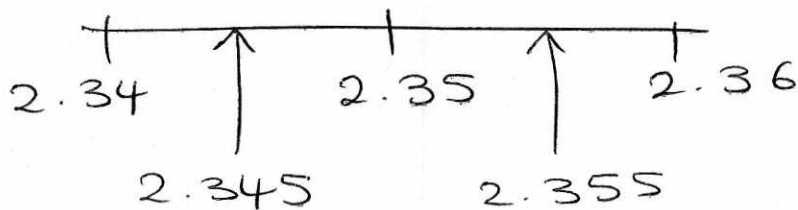
$$\underline{1.255 \leq y < 1.265}$$

(Total for question 12 is 2 marks)

13 A number x is rounded to 2 decimal places.

The result is 2.35

Write down the error interval for x .



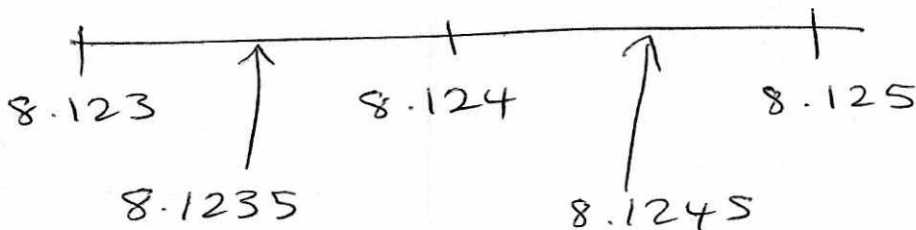
$$2.345 \leq x < 2.355$$

(Total for question 13 is 2 marks)

14 A number x is rounded to 3 decimal places.

The result is 8.124

Write down the error interval for x .



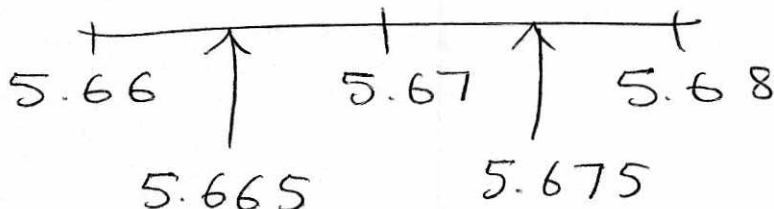
$$8.1235 \leq x < 8.1245$$

(Total for question 14 is 2 marks)

15 A number x is rounded to 3 significant figures.

The result is 5.67

Write down the error interval for x .



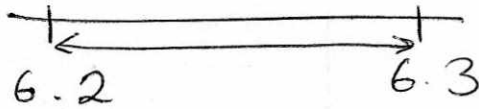
$$5.665 \leq x < 5.675$$

(Total for question 15 is 2 marks)

16 A number x is **truncated** to 1 decimal place.

The result is 6.2

Write down the error interval for x .



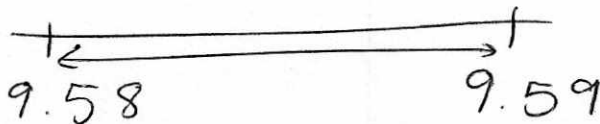
$$\underline{\underline{6.2 \leq x < 6.3}}$$

(Total for question 16 is 2 marks)

17 A number x is **truncated** to 2 decimal places.

The result is 9.58

Write down the error interval for x .



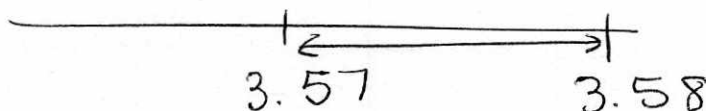
$$\underline{\underline{9.58 \leq x < 9.59}}$$

(Total for question 17 is 2 marks)

18 A number x is **truncated** to 2 decimal places.

The result is 3.57

Write down the error interval for x .



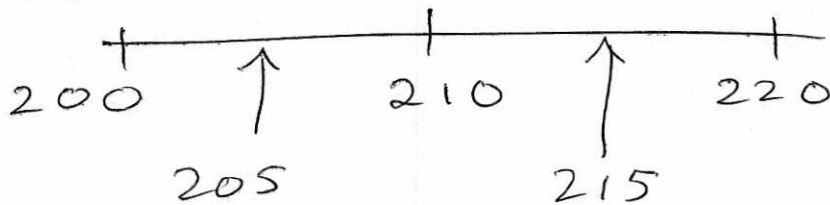
$$\underline{\underline{3.57 \leq x < 3.58}}$$

(Total for question 18 is 2 marks)

19 A number x is rounded to 2 significant figures.

The result is 210

Write down the error interval for x .



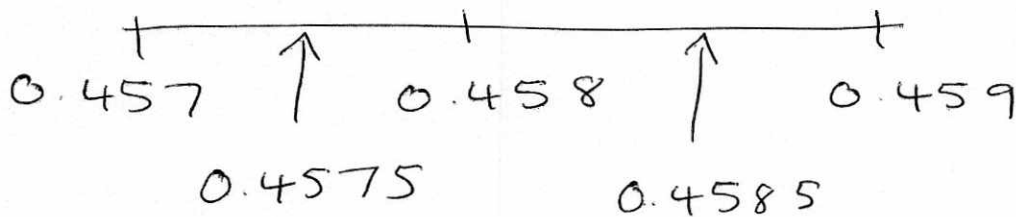
$$205 \leq x < 215$$

(Total for question 19 is 2 marks)

20 A number x is rounded to 3 significant figures.

The result is 0.458

Write down the error interval for x .



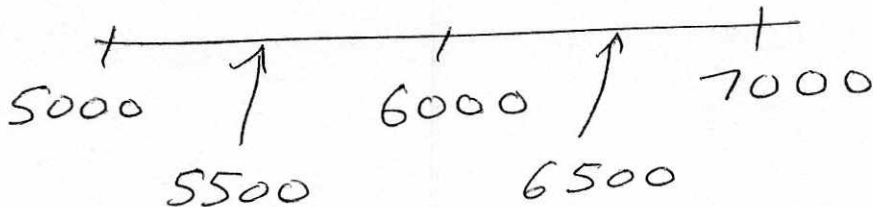
$$0.4575 \leq x < 0.4585$$

(Total for question 20 is 2 marks)

21 A number x is rounded to 1 significant figure.

The result is 6000

Write down the error interval for x .



$$5500 \leq x < 6500$$

(Total for question 21 is 2 marks)