1.7 Rounding: 30-minute Pack

EDEXCEL 1MA1 · Calculator allowed · about 30 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Round 7.958 to 2 significant figures.

(Total for Question 1 is 1 mark)

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2 Work out 1.93 + 2.36. Give your answer to the nearest whole number.

(Total for Question 2 is 2 marks)

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3 A machine measures a length as 288.564 metres. Write this length (a) correct to 1 decimal place, (b) correct to 3 significant figures.

(Total for Question 3 is 2 marks)

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4 A charity 10 km fun run had 1,367 finishers.
Round 1,367 to the nearest 100.

(Total for Question 4 is 1 mark)

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5 Write down the smallest whole number and the largest whole number that each round to 350 when rounded to the nearest 10.

(Total for Question 5 is 2 marks)

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6 Circle the correctly rounded value of 3,782 to the nearest 100.

- ☐ A) 3,700
- ☐ B) 3,800
- ☐ C) 3,900
- ☐ D) 4,000

(Total for Question 6 is 1 mark)

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7 This question is about rounding to significant figures and estimating.

(a) Circle the number below that rounds to 6.0 when rounded to 2 significant figures. **(1)**

5.949 5.96 6.05 6.14

- ☐ A) 5.949
- ☐ B) 5.96
- ☐ C) 6.05
- ☐ D) 6.14

(b) Sam buys 32 concert tickets at £18.95 each. **(3)**

Estimate the total cost by rounding each number to 1 significant figure.

(Total for Question 7 is 4 marks)

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8 A school photocopier prints 5,834 pages in 58 minutes.

Estimate the number of pages it prints per minute, by rounding each number to 1 significant figure.

(Total for Question 8 is 3 marks)

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9 A cinema chain reported 156,742 admissions across its screens last week. Complete the table by rounding 156,742 to each of the accuracies shown.

(a) Round 156,742 to the nearest 10. **(1)**

(b) Round 156,742 to the nearest 1,000. **(1)**

(c) Round 156,742 to the nearest 10,000. **(1)**

(Total for Question 9 is 3 marks)

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10 Show that 0.3728 rounded to 3 significant figures is 0.373.

(Total for Question 10 is 2 marks)

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11 A recipe needs 0.0375 kg of sugar per portion. How much sugar is needed for 280 portions? Give your answer rounded to 2 significant figures for shopping.

(Total for Question 11 is 3 marks)

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Mark scheme · 1.7 Rounding: 30-minute Pack

A correct answer earns full marks unless the question asks for working, a method, proof or explanation.

Question 1

8.0 cao **B1**

Answer: 8.0

Question 2

4.29 seen **M1**

4 cao **A1**

Answer: 4

Question 3

288.6 cao **B1**

289 cao **B1**

Answer: (a) 288.6, (b) 289

Question 4

1,400 cao **B1**

Answer: 1,400

Question 5

345 cao (smallest) **B1**

354 cao (largest) **B1**

Answer: 345 (smallest) and 354 (largest)

Question 6

B (3,800) cao **B1**

Answer: B) 3,800

Question 7

(a) B (5.96) cao **B1**

(a) Answer: B) 5.96

(b) 32 rounds to 30 and 18.95 rounds to 20 oe **M1**

(b) dep multiplies the two rounded values **M1**

(b) 600 (pounds) cao, ft from correctly rounded values **A1**

(b) Answer: £600

Question 8

5,834 rounds to 6,000 oe **M1**

58 rounds to 60 oe **M1**

100 (pages per minute) cao, ft from correctly rounded values **A1**

Answer: 100 pages per minute

Question 9

(a) 156,740 cao **B1**

(a) Answer: 156,740

(b) 157,000 cao **B1**

(b) Answer: 157,000

(c) 160,000 cao **B1**

(c) Answer: 160,000

Question 10

identify first 4 significant digits 3,7,2,8 and note the 4th digit 8 causes rounding up oe **M1**

0.373 cao **A1 cso**

Answer: 0.373

Question 11

multiply 0.0375 x 280 = 10.5 shown **M1**

round 10.5 to 2 s.f. = 11.0 or 11 kg cao **A1**

state this is suitable as a shopping estimate oe **B1**

Answer: 11 kg

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