Rounding and estimation: 10 practice questions

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Name: _____ Date: _____

Attempt all questions and show your working. Suggested time: 15 to 20 minutes.

Section A: Consolidating (Questions 1-4)

Question 1

Round 3.476 to:

(a) one decimal place

(b) two decimal places

(c) the nearest whole number

Question 2

Round 12.0549 to:

(a) one decimal place

(b) two decimal places

(c) three decimal places

Question 3

Round 0.6382 to two decimal places.

Question 4

Round each number to the nearest whole number.

(a) 9.5

(b) 19.49

(c) 99.7

Section B: Standard (Questions 5-10)

Question 5

(a) Round 2.996 to one decimal place.

(b) Round 2.996 to two decimal places.

(c) Explain why the zeros at the end of your answers should be written down.

Question 6

(a) Round 0.04751 to three decimal places.

(b) Round 0.0961 to two decimal places.

Question 7

(a) Three friends share a $20 prize equally. How much does each person get, to the nearest cent?

(b) Petrol costs 187.9 cents per litre, which is $1.879 per litre. How much does 42 litres cost, to the nearest cent?

Question 8

(a) Estimate 6.9×4.1 by rounding each number to the nearest whole number.

(b) Calculate the exact answer and decide whether your estimate was reasonable.

Question 9

Estimate $19.8 \div 4.95$ by rounding each number to the nearest whole number. Then calculate the exact answer.

Question 10

Jack calculated $3.9 \times 5.2 = 202.8$. Use estimation to show that Jack's answer cannot be right, then find the correct answer.

Rounding and estimation: answers

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Question 1

Answer: (a) 3.5 (b) 3.48 (c) 3

Question 2

Answer: (a) 12.1 (b) 12.05 (c) 12.055

Question 3

Answer: 0.64

Question 4

Answer: (a) 10 (b) 19 (c) 100

Question 5

Answer: (a) 3.0 (b) 3.00 (c) The zeros show how accurately the number has been rounded (to one and to two decimal places).

Question 6

Answer: (a) 0.048 (b) 0.10

Question 7

Answer: (a) $6.67 (20 ÷ 3 = 6.666…) (b) $78.92 (42 × 1.879 = 78.918)

Question 8

Answer: (a) 28 (7 × 4) (b) 28.29; yes, the estimate is close, so it is reasonable.

Question 9

Answer: Estimate 20 ÷ 5 = 4; exact answer 4

Question 10

Answer: Estimate 4 × 5 = 20, so 202.8 is about ten times too big. Correct answer: 20.28