Rounding & Estimating: Hard Practice Paper 6

Q1. A rectangle has sides of 8 cm and 5 cm, each measured to the nearest centimetre. What is the largest possible perimeter?

A. 27 cm *B.* 26 cm *C.* 28 cm *D.* 30 cm *E.* 25 cm

Q2. Four numbers are each 3,000 when rounded to the nearest thousand. Which of these could NOT be one of them?

A. 2,999 *B.* 2,500 *C.* 3,499 *D.* 3,501 *E.* 3,050

Q3. To estimate 4,970 ÷ 51, Sam works out 5,000 ÷ 50 = 100. Is the true answer more or less than 100?

A. More than 100

B. Less than 100

C. Exactly 100

D. It cannot be decided

E. More, because both numbers were rounded

Q4. Estimate 0.0397 × 5,120.

A. About 2

B. About 20

C. About 2,000

D. About 200

E. About 500

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Q5. A lift can carry 500 kg. Nine people each weigh 55 kg, measured to the nearest kilogram. Could the lift be overloaded?

A. Yes, because the total could be 504 kg

B. No, because the greatest possible total is 499.5 kg

C. Yes, because 9 × 55 is more than 500

D. No, because the total is exactly 495 kg

E. It cannot be decided

Q6. A number is 4,560 to the nearest 10, 4,600 to the nearest 100 and 5,000 to the nearest 1,000. What is the smallest whole number it could be?

A. 4,500 *B.* 4,550 *C.* 4,555 *D.* 4,560 *E.* 4,565

Q7. A price rises from £198 to £297. Estimate the percentage increase.

A. About 50%

B. About 30%

C. About 100%

D. About 15%

E. About 66%

Q8. A number written to 3 significant figures is 0.0500. What is the smallest it could be?

A. 0.05005 *B.* 0.0495 *C.* 0.0499 *D.* 0.04995 *E.* 0.049

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Q9. A newspaper reports that 12,000 people each gave £18, raising 'about £2 million'. Use estimation to judge the report.

A. No, it should be about £200,000

B. Yes, about £2 million is right

C. No, it should be about £20,000

D. No, it should be about £20 million

E. It cannot be estimated

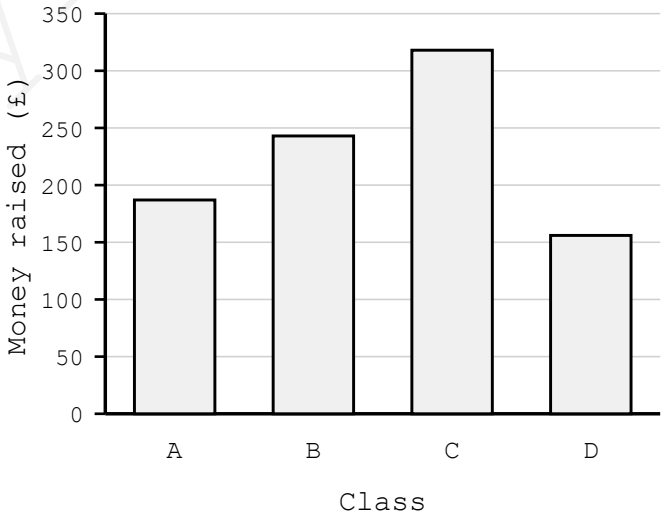
Q10. Two lengths are given as 12.6 cm and 8.3 cm, each to 1 decimal place. What is the largest possible difference between them?

A. 4.5 cm *B.* 4.3 cm *C.* 4.2 cm *D.* 4.35 cm *E.* 4.4 cm

Q11. What is the square root of 150 to the nearest whole number?

A. 12 *B.* 13 *C.* 11 *D.* 15 *E.* 75

Q12. The bar chart shows the money raised by four classes. Estimate the total to the nearest £100.



A. £1,000 *B.* £900 *C.* £850 *D.* £800 *E.* £950

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Q13. A pupil estimates a calculation by working out 30 × 200 = 6,000. Which calculation was it?

A. 0.31 × 196

B. 3.1 × 196

C. 31 × 19.6

D. 310 × 196

E. 31 × 196

Q14. A tap leaks 3.9 litres of water every hour. Estimate how much it wastes in a week.

A. About 70 litres

B. About 100 litres

C. About 500 litres

D. About 1,000 litres

E. About 700 litres

Q15. Estimate 19.8% of 4,050.

A. About 80

B. About 400

C. About 800

D. About 1,000

E. About 200

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