



New Maths GCSE: N14 - Estimating Calculations using Significant Figures

Name:

Date:

By rounding each number to one significant figure, which is the correct estimation of the following calculation:

$$\frac{12.8 \times 9.2}{5.6^2}$$

A $\frac{13 \times 9}{6^2}$ **B** $\frac{10 \times 9}{5^2}$

C $\frac{10 \times 9}{6^2}$ **D** $\frac{12.8 \times 9.2}{5.6^2}$

Correct Answer: A B C D

Explanation:

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By rounding each number to one significant figure, which is the correct estimation of the following calculation:

$$\frac{5.46 \times 3.82}{8.61^2}$$

A $\frac{5.4 \times 3.8}{8.6^2}$ **B** $\frac{5 \times 3}{8^2}$

C $\frac{5.5 \times 3.8}{8.6^2}$ **D** $\frac{5 \times 4}{9^2}$

Correct Answer: A B C D

Explanation:

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By rounding each number to one significant figure, which is the correct estimation of the following calculation:

$$\frac{23 \times 570}{3.8^2}$$

A $\frac{20 \times 600}{4^2}$ **B** $\frac{2 \times 6}{4^2}$

C $\frac{23 \times 570}{4^2}$ **D** $\frac{23 \times 500}{3^2}$

Correct Answer: A B C D

Explanation:

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By rounding each number to one significant figure, which is the correct estimation of the following calculation:

$$\frac{6.712 \times 15}{349^2}$$

A $\frac{7 \times 15}{350^2}$ **B** $\frac{6 \times 15}{349^2}$
C $\frac{6.7 \times 15}{349^2}$ **D** $\frac{7 \times 20}{300^2}$

Correct Answer: A B C D

Explanation:

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By rounding each number to one significant figure, which is the correct estimation of the following calculation:

$$\frac{10.8 \times 230}{0.783^2}$$

A $\frac{11 \times 230}{0.8^2}$ **B** $\frac{10 \times 200}{1^2}$
C $\frac{10 \times 200}{0.8^2}$ **D** $\frac{11 \times 200}{1^2}$

Correct Answer: A B C D

Explanation:

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What is a sensible estimation for the answer to 0.48×4.1 ?

A 4.58 **B** 20
C 0.2 **D** 2

Correct Answer: A B C D

Explanation:

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Follow up Questions for Edexcel GCSE – June 2014 – Higher – Paper 1 – Question 13

In a competition, a prize is won every 3033 seconds. Work out an estimate for how many prizes are won in each 24 hour period. Step 2

Which of the following gives a reasonable estimate of the number of seconds in a 24 hour period?

A $\frac{60 \times 60}{20}$ **B** 60×60
C 60×20 **D** $60 \times 60 \times 20$

Correct Answer: A B C D

Explanation:

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Estimate
 32×18

A 600 B 300

C 800 D 576

Correct Answer: A B C D

Explanation:

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Estimate
 $\frac{76 \times 61}{26}$

A 240 B 140

C 160 D 210

Correct Answer: A B C D

Explanation:

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