

Multiply and divide (Intermediate UKMT)

These questions must be attempted without a calculator

Topics covered in the questions below may not necessarily be from the topic of the title.

1. $30 \div 0.2$ equals

- A 1.5 B 6 C 15 D 150 E 600

2. Which of the following has the greatest value?

- A 0.3×7 B 0.5×5 C 0.2×11 D 0.09×30 E 0.026×100

3. You are given that $2786 \times 231 = 643566$.

What is the value of $643566 \div 27.86$?

- A 23100 B 2310 C 231 D 23.1 E 2.31

4. What is the value of $(12340 + 12.34) \div 1234$?

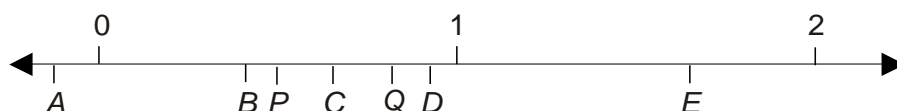
- A 100.01 B 100.1 C 10.001 D 10.01 E 10.1

5. A ream of paper (500 sheets) is 5.4 cm thick.

What is the thickness of a single sheet, correct to one significant figure?

- A 1 mm B 0.5 mm C 0.1 mm D 0.05 mm E 0.01 mm

6.



A, B, C, D, E, P and Q are points on the number line as shown. One of the points represents the product of the numbers represented by P and Q.

Which is it?

- A B C D E

7. In the *Soft Boulder Café* each table has 3 legs, each chair has 4 legs and all the customers and the three members of staff have two legs each. There are four chairs at each table. At a certain time, three-quarters of the chairs are occupied by customers and there are 206 legs altogether in the café.

How many *chairs* does the café have?

- A 20 B 24 C 28 D 32 E 36

8. Jasmine spends exactly £120 on three types of plants: poisoned ivy, deadly nightshade and triffids. Poisoned ivy plants cost £2 each, deadly nightshade plants cost £9 each and triffids cost £12 each. She buys twenty plants in total, including at least one of each type.

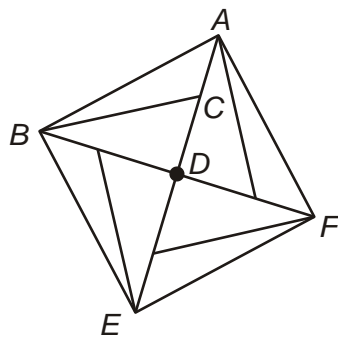
How many triffids did she buy?

- A 1 B 2 C 3 D 4 E more information is needed

9. What is the area (in square units) of the triangle formed by the three lines whose equations are: $y - x = 6$, $x - 2y = 3$, $x + y = 6$?

- A 55 B 60 C 65 D 70 E 75

10. The diagram has order 4 rotational symmetry about D . If angle ABC is 15° and the area of $ABEF$ is 24cm^2 , what, in cm, is the length of CD ?



- A 1 B $\sqrt{3}$ C 2 D $\sqrt{5}$ E $2\sqrt{3} - 1$