

Problem Solving GCSE Questions 9

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(1) Two cars are for sale at a garage.

Car 1
£22500 including
VAT at 20%

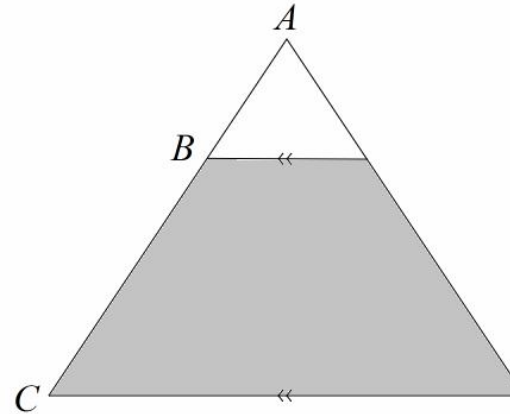
Car 2
£19888 excluding
VAT at 20%

Find the difference between the pre VAT prices of the two cars.

(2) Fred travels on a bearing of 048° for 5 miles.

How far east has Fred travelled from his original starting point?

(3) An isosceles triangle is shown in the diagram below.

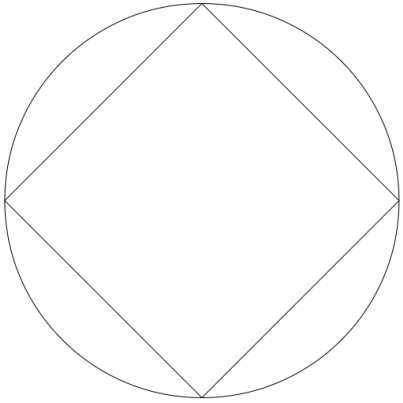


The ratio of $AB : BC$ is $1 : 2$.
What fraction of the triangle is not shaded?

(4) Jane can travel 475 miles on 38 litres of petrol.

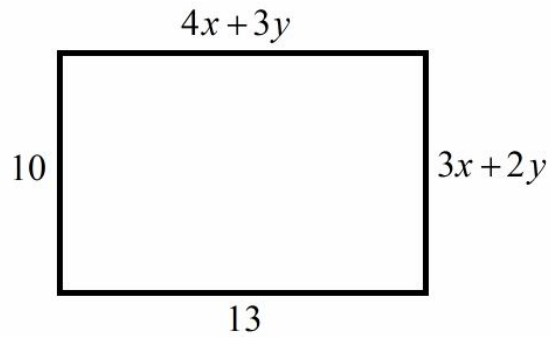
Jane is going on a road trip. Jane leaves home at 4:15pm and arrives at her destination at 7:35pm. Given that she travels at an average speed of 42mph, find the amount of petrol she uses.

(5) A circle with radius 5cm is shown in the diagram below. The circle has a square drawn inside. The vertices of the square lie on the circumference of the circle.



Find the perimeter of the square.
Give your answer to one decimal place.

(6) The diagram below shows a rectangle. Using the information given in the diagram, find the value of $x^2 - 2y$.



(7) In a factory the ratio of men to women is 1:4. 15% of the men in the factory leave. What percentage of the total number of people left in the factory are women?

(8) There are 8 counters in a box. Half are red and half are not. 3 counters are taken out and not replaced. Find the probability that at most 2 counters chosen are red..