

OCR GCSE Mathematics Non-Calculator 2024 Foundation Paper 2 Revision Worksheet

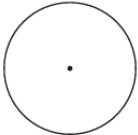
Question 10

Simplify.

- (a) $3x + 6y - x + 5y$
- (a) [2]
- (b) $5a \times 6b$
- (b) [1]

Question 11

The table shows the plan view and front elevation of some 3D solids. Write the name of each 3D solid in the third column of the table.

Plan view	Front elevation	Name of 3D solid
		
		
		

Question 12

Complete each statement by writing the missing power in the box.

- (a) $6^3 \times 6^4 = 6^{\square}$
- (b) $(2^2)^4 = 2^{\square}$

Question 13

(a) Work out the next term in this sequence:

1, 3, 6, 10, [1]

(b) In the Fibonacci sequence below, the next term is found by adding the two previous terms. The second term is 7, the third term is 10 and the fourth term is 17. Work out the first and fifth terms of the sequence.

..... 7, 10, 17, [2]

Question 14

Use the formula $v^2 = u^2 + 2as$

to find the final velocity when:

- the initial velocity is 6 m/s
- the acceleration is 4 m/s²
- the distance travelled is 8 m

..... m/s [3]

Question 15

Compost is used to grow plants. Ivan has a sack containing 50 litres of compost. He uses this compost to fill pots for his plants.

(a) Ivan fills six large pots each holding 7.5 litres. **Work out how much compost is left in the sack.**

(a) litres [2]

(b) Ivan uses the remaining compost to fill small pots each holding 400 ml. **Work out the maximum number of small pots Ivan can fill with the remaining compost.**

(b) [3]

(c) Work out how much compost will then be left in the sack.

(c) ml [2]

Question 16

The table shows how much Amaya earns per hour:

Work done on	Rate per hour
Monday–Friday	£20.15
Saturday/Sunday	£30.23

One week Amaya works for $40\frac{1}{3}$ hours between Monday and Friday and then for $4\frac{1}{4}$ hours on Saturday.

- (a) Amaya says, "I will earn at least £900 for my work this week." By rounding each value to the nearest integer, use estimation to show that Amaya may be correct. [5]
- (b) Give one reason why your working in part (a) shows that Amaya can be certain of earning at least £900 for her work in this week.

Question 17

Work out: $1.2 + 0.03$

Question 18

Kai has these four number cards: 0, 2, 5, 9. Kai takes two of the cards at random without replacement and finds the positive difference between the two numbers.

		First card			
Difference		0	2	5	9
Second card	0		2	5	9
	2	2		3	
	5	5			
	9	9			

- (a) Complete the table to show all of the possible differences.

- (b) Find the probability that Kai takes two cards with a difference that is an even number or a factor of 10.

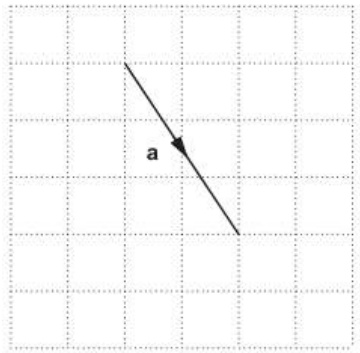
Question 19

Using ruler and compasses only, construct the perpendicular bisector of the line AB. Leave your construction lines visible.



Question 20

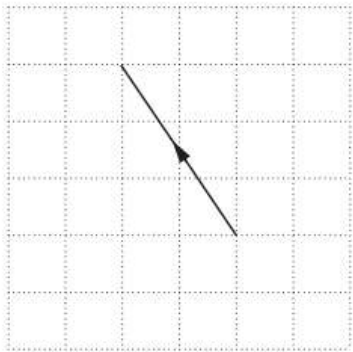
Vector **a** is drawn on this grid.



(a) Write vector **a** as a column vector.

(a) $\begin{pmatrix} \\ \end{pmatrix}$

(b) A vector is drawn on this grid.



Write this vector in terms of **a**.