AQA
Maths Practice

FM QS
2023
IGSCE

TIME ALLOWED : 30 MINUTES

NAME:_____

INSTRUCTIONS:

- **Answer all questions**
- **Calculators allowed**

INFORMATION:

- **The marks for questions are shown in brackets**
- **The maximum mark for this paper is 19**
- **All questions have been thoroughly tested and are possible to solve for year 10 students**

1 Solve for x when $y = 5x$

$$3(3x - y)(x + 2y) = 3(2x - 1)(2y - 4)$$

Use the equation:

$$x = \frac{-b \pm \sqrt{(b^2 - 4ac)}}{2a}$$

to solve quadratic equations.

[4 marks]

$x =$ _____ or _____

2 (a) Make V the subject of

$$a = 3\frac{V}{4\pi bc}$$

[2 marks]

$V =$ _____

2 (b) Express this rearranged equation as a function

[1 mark]

Answer _____

2 (c) Using this function,

Find the product of a, b, c if

$$f: (a, b, c) \longmapsto 40\pi$$

[2 marks]

$abc =$ _____

3 Give suitable values for T, G, E if

$$5T + \frac{1}{2}G - 7E = 49$$

Give your answers to **one** decimal place.

[2 marks]

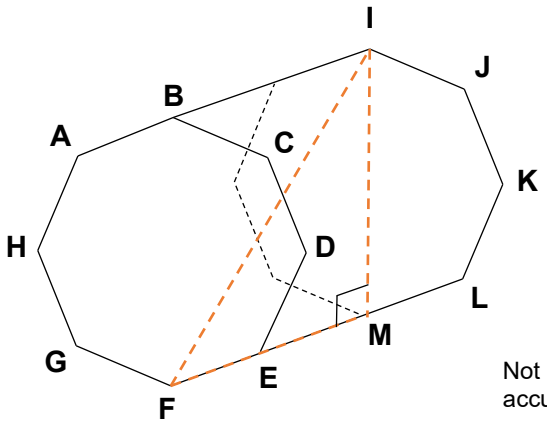
$T =$ _____ , $G =$ _____ , $E =$ _____

5 The following regular octagonal prism is made up of string, where there are no surfaces.

Work out the length of string needed.

$$FI = 5cm$$

$$\angle IFM = 54°$$



Not drawn accurately

[5 marks]

Answer _____