



EXAM PAPERS PRACTICE

GCSE OCR Math J560

Substitution

Question Paper

*"We will help you to
achieve A Star "*



Question 1



You can work out the amount of medicine, c ml, to give to a child by using the formula

$$c = \frac{ma}{150}$$

m is the age of the child, in months.

a is an adult dose, in ml.

A child is 30 months old.

An adult's dose is 40 ml.

Work out the amount of medicine you can give to the child.

[2 marks]



Question 2

The body mass index, B , for a person of mass m kg and height h metres is given by the formula

$$B = \frac{m}{h^2}$$

Usman has a mass of 50 kg.

He has a height of 1.57 m.

- (a) Work out Usman's body mass index.
Give your answer correct to one decimal place.

[2 marks]

Question 3

$$f = 3g + 7h$$

Work out the value of f when $g = -5$ and $h = 2$

[2 marks]



Question 4

$$W = \frac{5.6a}{b^2}$$

$$a = 1.28 \quad b = 0.8$$

Work out the value of W .

[2 marks]

Question 5

Tom's height is 1.80 m.

He wants his body mass index to be 21

(b) Work out the mass that will give Tom a body mass index of 21

[2 marks]

Question 6

$$v = w^2 - 2w.$$

Work out the value of v when $w = 6$

[2 marks]



Question 7

$$H = g^3 + 6g$$

Work out the value of H when $g = 2$

[2 marks]

Question 8

You can change temperatures from $^{\circ}\text{F}$ to $^{\circ}\text{C}$ by using the formula

$$C = \frac{5(F - 32)}{9}$$

F is the temperature in $^{\circ}\text{F}$.

C is the temperature in $^{\circ}\text{C}$.

The minimum temperature in an elderly person's home should be 20°C .

Mrs Smith is an elderly person.

The temperature in Mrs Smith's home is 77°F .

Decide whether or not the temperature in Mrs Smith's home is lower than the minimum temperature should be.

[3 marks]



Question 9

$$h = 3t^2$$

(a) Work out the value of h when $t = 5$

[2 marks]

Question 10

$$A = 4bc$$

$$A = 100$$

$$b = 2$$

Work out the value of c .

[2 marks]

Question 11

$$y = p - 2qx^2$$

$$p = -10$$

$$q = 3$$

$$x = -5$$

Work out the value of y .

[2 marks]



Question 12

$$x = 0.7$$

Work out the value of $\frac{(x + 1)^2}{2x}$

Write down all the figures on your calculator display.

[2 marks]