The National Orthodox School Shmaisani

Mark
10

Subject: Mathematics **Second Semester / Quiz (2)**

Name: **Grade 8 CS ( )**

Date:

Question 1 **2 marks**

I think of a number, **n**, subtract 5 then square it, then multiply by 8.

Find an expression for the number I end up with.

$8(n-5)^2 = 8(n^2-10n+25)$

$= 8n^2-80n+200$

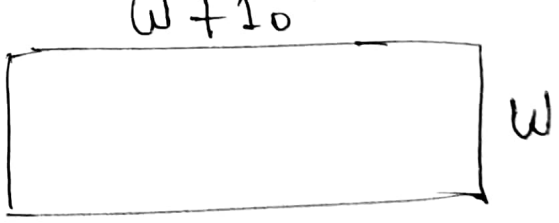
Question 2 **2 marks**

A rectangle has width, **w**. The length of the rectangle is 10 more than the width. Find an expression for the perimeter of the rectangle.

$P = 2w + 2(w+10)$

$P = 2w + 2w + 20$

$P = 4w + 20$



OR $P = w + w + w + 10 + w + 10$

$= 4w + 20$.

Question 3

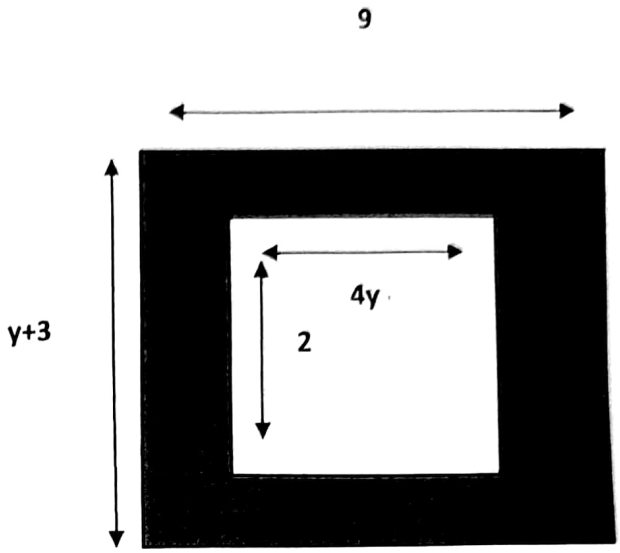
2 marks

Find an expression for the shaded area of the following shape made using rectangles:

$9(y+3) - 2(4y)$

$9y + 27 - 8y$

$= y + 27$



Question 4

4 marks

Make x the subject of these formulae.

a) $y = x - 7$

$x = y + 7$

b) $y = \frac{x+r}{3}$

$3y = x + r$

$-r \quad -r$

$x = 3y - r$

c) $y = 3x^2w$

$$x^2 = \frac{y}{3w}$$

$$x = \pm\sqrt{\frac{y}{3w}}$$

d) $y = 2(t + x)$

$$y = 2t + 2x$$

$-2t \quad -2t$

$$2x = y - 2t$$

$$\boxed{x = \frac{y-2t}{2}} = \frac{y}{2} - t.$$

Thank you!