Solutions of equations and inequalities – 2022 O Level Math D

1. June/2022/Paper_12/No.24

(a) Solve $\frac{2-5x}{3x+10} = 3$.

$x =$ ..... [3]

(b) Express as a single fraction in its simplest form $\frac{3}{x-2} - \frac{5}{2x+1}$.

..... [3]

2. June/2022/Paper_21/No.8

(a) Apples cost $\$x$ per kilogram and oranges cost $\$y$ per kilogram.
The total cost of 5 kg of apples and 10 kg of oranges is \$40.

(i) Show that $x+2y=8$.

[1]

(ii) The total cost of 4 kg of apples and 3 kg of oranges is \$19.

Use simultaneous equations to find the cost of 1 kilogram of apples and of 1 kilogram of oranges.
Show your working.

Apples \$ .....

Oranges \$ ..... [4]

(b) Solve $-8 < 4(x-3) < 7$.

..... [3]

(c) Solve $\frac{4}{x-1}+\frac{2}{2x+3}=1$.

Show all your working and give your answers correct to 2 decimal places.

$x =$ ..... or $x =$ ..... [6]

3. June/2022/Paper_22/No.2

(a) $A = 3p + q$

Find q when $A = 23$ and $p = 5$.

$q =$ ..... [2]

(b) Expand and simplify $2(2x + 5) + 3(x - 6)$.

..... [2]

(c) Solve $5y + 3 = 1$.

$y =$ ..... [2]

(d) Factorise $12r^2 - 8rs$.

..... [2]

(e) Rearrange $a = 3b$ to make b the subject.

..... [1]