

SUMMER QUIZ 02

Form 1 Summer Course

Algebra

Equation

Part A – MC (@2 marks)

1.	C	Larger number = x Smaller number = $x - 2$ Sum = $x + (x - 2) = 2x - 2$
2.	C	$P = -2(-1)^{2019} + 5 = 7$
3.	C	$(5 - x)(2x + 1)$ $= 10x + 5 - 2x^2 - x$ $= -2x^2 + 9x + 5$
4.	B	
5.	C	$2x - 5 = 11$ $2x = 16$ $x = 8$
6.	C	$2x + 1 = 5$ $2x = 4$ $x = 2$
7.	B	$6(x - 7) = 5(5x + 3)$ $6x - 42 = 25x + 15$ $19x = -57$ $x = -3$
8.	B	$\frac{x}{3} - \frac{3x - 2}{2} = 8$ $2x - 3(3x - 2) = 48$ $2x - 9x + 6 = 48$ $-7x = 42$ $x = -6$

1. C 2. C 3. C 4. B 5. C
6. C 7. B 8. B

Part B – Short Questions

1. $(x - y) - (5x + 8y)$
 $= x - y - 5x - 8y$ 1M
 $= x - 5x - y - 8y$ 1M (for grouping) (can be absorbed)
 $= -4x - 9y$ 1A
(3)

2. $2x^2 \times (-5x^3) \times (-3x)$
 $= [2(-5)(-3)](x^2 \cdot x^3 \cdot x)$ 1M (for grouping) (can be absorbed)
 $= [2(-5)(-3)]x^{2+3+1}$ 1M
 $= 30x^6$ 1A
(3)

3. $-3x(x^2 + 2 - 7x)$
 $= -3x^3 - 6x + 21x^2$ 2M (can be absorbed)
 $= -3x^3 + 21x^2 - 6x$ 1A
(3)

4. $-2(2x - 7)^2$
 $= -2(2x - 7)(2x - 7)$
 $= -2(4x^2 - 14x - 14x + 49)$ 1M
 $= -2(4x^2 - 28x + 49)$ 1M
 $= -8x^2 + 56x - 98$ 1A
(3)

5. $\frac{5x - 4}{3} = 7$
 $5x - 4 = 21$ 1M
 $5x = 25$ 1M
 $x = 5$ 1A
(3)

$$\begin{aligned}
 6. \quad & -2(2-x) = x-1 \\
 & -4+2x = x-1 && 1M \\
 & 2x-x = -1+4 && 1M \\
 & x = 3 && 1A \\
 & && (3)
 \end{aligned}$$

$$\begin{aligned}
 7. \quad & -\frac{3}{2x} + \frac{4}{7} = \frac{9}{28} \\
 & -\frac{3}{2x} = \frac{9}{28} - \frac{4}{7} \\
 & -\frac{3}{2x} = -\frac{1}{4} \\
 & -\frac{2x}{3} = -4 && 1M \\
 & x = (-4)\left(-\frac{3}{2}\right) && 1M \\
 & x = 6 && 1A \\
 & && (3)
 \end{aligned}$$

$$\begin{aligned}
 8. \quad & 3x - [5(x+1) - 4x] = 3x + 10 \\
 & 3x - (5x + 5 - 4x) = 3x + 10 \\
 & 3x - (x + 5) = 3x + 10 \\
 & 3x - x - 5 = 3x + 10 && 1M \\
 & 3x - x - 3x = 10 + 5 && 1M \\
 & -x = 15 \\
 & x = -15 && 1A \\
 & && (3)
 \end{aligned}$$

$$9. \quad (a) \quad 2x - 8 \quad 1A$$

$$(b) \quad 2x - 5 \quad 1A$$

$$\begin{aligned}
 (c) \quad & 2(18) - 8 + 5 && 1M \\
 & = 33 && 1A \\
 & && (4)
 \end{aligned}$$