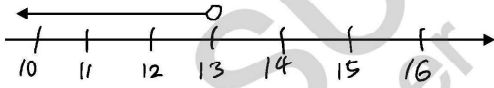


RGSS Marking scheme 2Exp EMath 2023 (SA2 Paper 1) – Setter: Ms Lee YY

Question		Remarks
1a	$4x^2 + 4x + 1$	B1
1b	$-x + 2x - 6y$ $= x - 6y$	M1 A1
2	$\frac{3x + 4(2 - x)}{12} = 1$ $3x + 8 - 4x = 12$ $-x = 4$ $x = -4$	M1 M1 A1
3a	$4(x - 4) < 3x - 3$ $4x - 16 < 3x - 3$ $x < 13$	M1 A1
3b		B1 Allow ecf
3c	11	B1 Allow ecf
4a	$7a(3ab - 1)$	B1
4b	$2(25 - 4p^2)$ $= 2(5 - 2p)(5 + 2p)$	M1 A1
4c	$x(5a + 2b) - 2y(5a + 2b)$ $= (5a + 2b)(x - 2y)$	M1 A1
5a	$\frac{274}{50}$ $= 5.48h$	M1 A1
6a	7.5×3.5 $= 26.25km$	M1 A1
6b	$1cm^2 : 12.25km^2$ $\frac{5}{12.25}$ $= 0.408cm^2$	M1 A1
7a	17 students	B1
7b	5 students	B1

7c	Yes, I agree with Nurul. This is because the mean duration is 2.91 hours and 3 hours is more than 2.91 hours.	M1 A1	
8a	$A = (-5, 0)$ $B = (1, 0)$	B1 B1	
8b	$x - -2$	B1	
9	$2430 = 4\pi r^2$ $r^2 = \frac{2430}{4\pi}$ $r = \sqrt{\frac{2430}{4\pi}}$ $r = 13.90587\dots$ $r = 13.9$	M1 M1 A1	
10	$12x + 15y = 21$ $12x + 16y = 20$ $y = -1$ $x = 3$	M1 A1 A1	Accept any other reasonable method
11a	$y = \frac{1}{2}$	B1	
11b	No, as y decreases when x increases, y is not directly proportional to x . OR No, as y decreases when x increases, y is inversely directly proportional to x .	B1	Award B1 only if students provide justifications
12a	$BN^2 + 4.6^2 = 7.2^2$ $BN = 5.5390\dots$ $BN = 5.54cm$	M1 A1	
12b	$\tan 63^\circ = \frac{4.6}{NC}$ $NC = \frac{4.6}{\tan 63^\circ}$ $NC = 2.34382\dots$ $NC = 2.34cm$	M1 A1	

12c	$\frac{1}{2} \times 7.8828... \times 4.6$ = 18.13048.. = 18 $1cm^2$	M1 A1
13a	$\frac{180^\circ - 36^\circ}{2}$ = 72°	M1 A1
13b	2.5	B1
13c	$\frac{3.8}{2.5}$ = 1.52cm	M1 A1
14a	18 leaves	B1
14b	$\frac{30}{50}$ = $\frac{3}{5}$	M1 A1