

WANDOOR GANITHAM - S S L C UNIT TEST 2021

10.9AE

GEOMETRY AND ALGEBRA – ANSWER KEY

Qn no.	Key	Score	
1	a) $\frac{7-2}{5-1} = \frac{5}{4}$ b) (9,12) or (13,17) or (17,22) ...	1 1	2
2	a) $(\frac{1+7}{2}, \frac{7+3}{2}) = (4,5)$ b) (2,2)	1 1	2
3	a) $(\frac{4+2}{2}, \frac{5+1}{2}) = (3,3)$ b) $(5+3-2, 2+3-1) = (6,4)$ c) $(5+6-3, 2+4-3) = (8,3)$	1 1 1	3
4	a) $\frac{9-5}{3-1} = 2$ b) Slope of the line QR = $\frac{17-9}{7-3} = 2$ Since the slopes are equal , P,Q,R on the same line . c) Slope of the line joining the points (3, 9), (9, 11) = $\frac{11-9}{9-3} = \frac{2}{6}$ Since the slopes are not equal , the points are not on the same line . That is they are the vertices of a triangle .	1 1 1	3

5	a) $\sqrt{(9-3)^2 + (13-5)^2} = 10$ b) $BC = \sqrt{(10-9)^2 + (6-13)^2} = \sqrt{50}$ $AC = \sqrt{(10-3)^2 + (6-5)^2} = \sqrt{50}$ $BC = AC$ c) $(\frac{9+3}{2}, \frac{13+5}{2}) = (6,9)$ d) Perpendicular distance from C to AB = $\sqrt{(10-6)^2 + (6-9)^2} = 5$ Area of the triangle = $\frac{1}{2} \times 10 \times 5 = 25 \text{ cm}^2$	1 1 1 1 1	5
6	a) Parallelogram b) $(3+6-7, 1+5-2) = (2,4)$ c) $(3,6)$ d) $(9,4)$ e) $(5,0)$	1 1 1 1 1	5