



National  
Qualifications  
2023

**X833/77/51**

**Geography  
Supplementary item D  
for Question 2**

TUESDAY, 25 APRIL

9:00 AM – 11:30 AM



\* X 8 3 3 7 7 5 1 \*

## SUPPLEMENTARY ITEM D

Diagram 1 Slope analysis data collected by the students

|                                      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|--------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Distance along slope (m)             | 0    | 10   | 20   | 30   | 40   | 50   | 60   | 70   | 80   | 90   | 100  | 110  | 120  | 130  | 140  |
| Angle of slope (degrees)             | 15   | 11   | 17   | 32   | 22   | 8    | 19   | 15   | 12   | 12   | 10   | 20   | 35   | 37   | 40   |
| Soil depth(m)                        | 0.63 | 0.49 | 0.46 | 0.54 | 0.18 | 0.68 | 0.47 | 0.15 | 0.25 | 0.31 | 0.34 | 0.29 | 0.20 | 0.15 | 0.11 |
| Soil moisture (%)                    | 47.9 | 34.2 | 47.3 | 46.5 | 43.2 | 22.8 | 41.5 | 20.3 | 27.3 | 25.1 | 27.6 | 20.4 | 15.8 | 11.5 | 9.4  |
| Soil pH                              | 6.1  | 6.6  | 6.4  | 5.7  | 5.3  | 5.7  | 4.3  | 5.5  | 4.6  | 4.9  | 4.6  | 4.4  | 4.4  | 4.2  | 4.3  |
| Average height of plant species (cm) | 23   | 25   | 14   | 9    | 15   | 23   | 11   | 12   | 12   | 9    | 4    | 2    | 2    | 3    | 1    |

SUPPLEMENTARY ITEM D (continued)

Diagram 2 Scatter graph comparing angle of slope with average height of plants

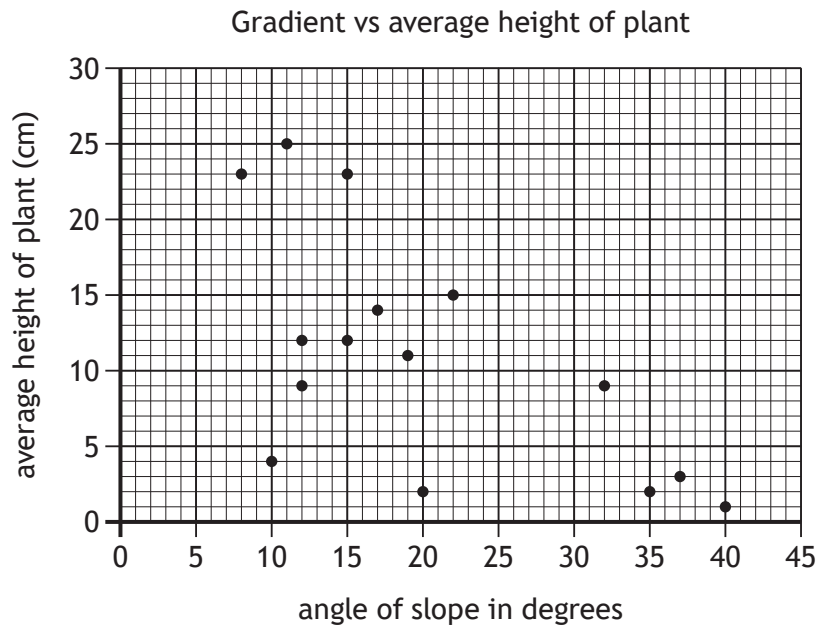


Diagram 3 Pearson's Product Moment correlation coefficient calculation

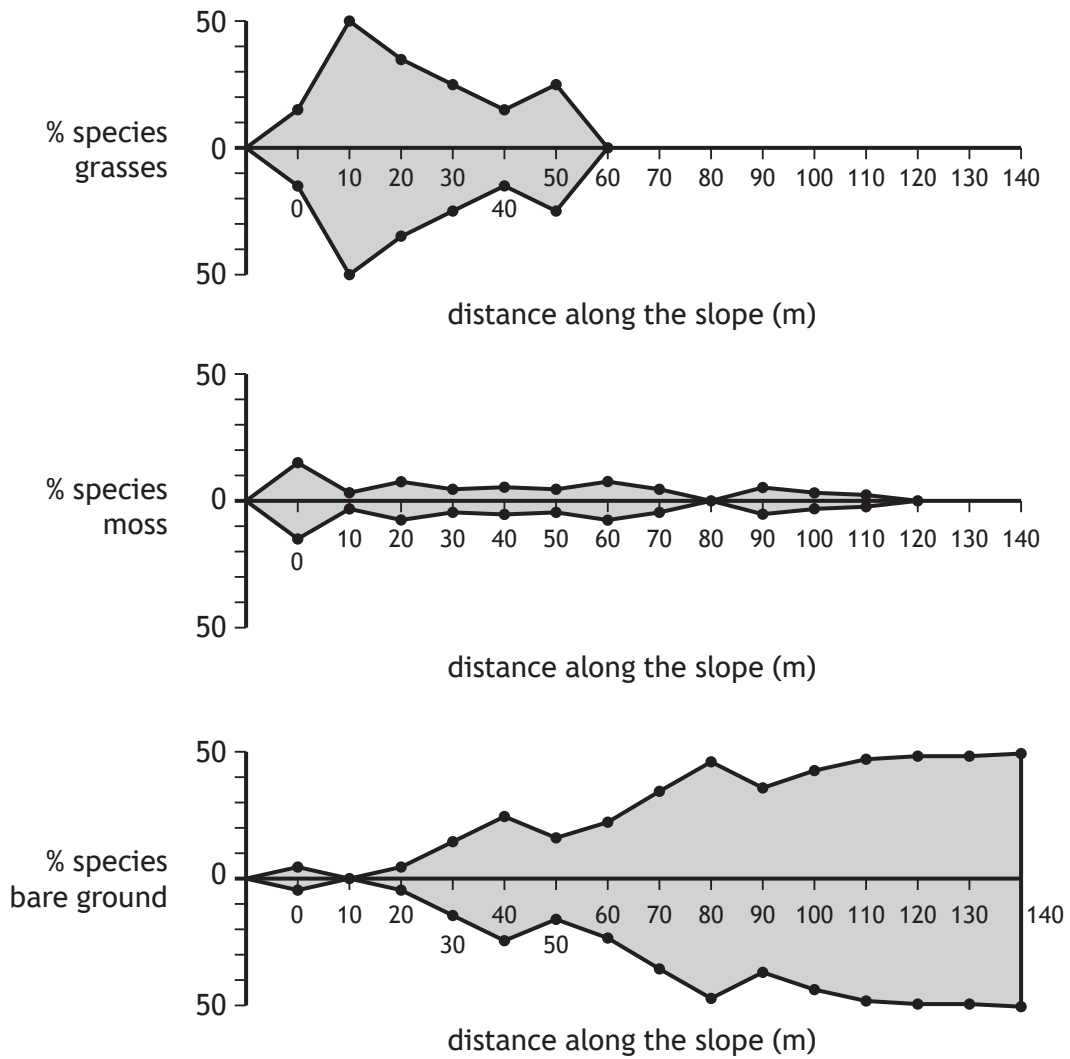
Result of calculation= -0.63

| Degrees of freedom | Significance level | Significance level |
|--------------------|--------------------|--------------------|
|                    | 95%                | 99%                |
| 13                 | 0.514              | 0.641              |

[Turn over

SUPPLEMENTARY ITEM D (continued)

Diagram 4 Kite Diagrams showing vegetation cover along the slope



[END OF SUPPLEMENTARY ITEM D]