**PANGANI GIRLS’ HIGH SCHOOL**

**POST MOCK 2022**

***Kenya Certificate of Secondary Education (KCSE)***

***Feb 2022***

**PAPER 121/2**

**MARKING SCHEME**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  (3 marks) |
|  |   |  |  (3 marks) |
|  |   |  |  (3 marks) |
|  |  |  |  (3 marks) |
|  |  |  |  (3 marks) |
|  |  |  |  (3 marks) |
|  |  |  |  (3 marks) |
|  |  |  |  (4 marks) |
|  |  |  |  (2 marks) |
|  |  |  |  (3 marks) |
|  | 1. (a) Expand (1 + ½*x*)10up to the fourth term.

  (b) Hence, find the value of (0.84)10. (3 marks)  |  |  (3 marks) |
|  |  |  |  |
|  | 1. .

(a) Calculate the length PQ. (2 marks)(b) If ZT = 4cm and PT: TQ = 3:5, find XT. (2 marks) |  |  (4 marks) |
|  | Let the constants be hand K so that: |  |  (3 marks) |
|  |  |  |  (3 marks) |
|  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 17. |  | M1A1M1M1M1A1M1M1M1A1 |  |
|  |  | 10 |  |
| 18. | Maths%20ms%20pp2%20q18 | B1B1M1A1M1A1M1A1M1A1 | B1 for two complete branches |
|  |  | 10 |  |
| 19. | Maths%20ms%20pp2%2019 | B1B1B1B1B1B1B1B1B1B1 |  PQ and QR to error ± 0.1cmmeasurement of 480construction of PRof L1drawing of L2location of Mmeasurement of M= 3.8 ±0.1cm arc drawn through Mshadinglabelling of shaded region |
|  |  | 10 |  |
| 20. | Maths%20ms%20pp2%2020(b)(i)BM2 =62 + 82 BM = 10cm (ii)Maths%20ms%20pp2%20q20BD2 = 122 + 82 BD = 14.42cm P = (14.42 + 10 + 10) cm = 34.42 cm(c) = angle between projection of EM on ABCD and the height of the prismheight, h =  h = √48 = 6.928cmProjection of EM on ABCD b = 6cmMaths%20ms%20pp2%20q20c | B1B1M1A1M1A1M1A1M1A1 | drawing of net NB:corresponding sides must be equal error allowed ±0.1cmlabellingBF and BC dividedPythagoras solvedlength of BD obtainedobtaining sides of triangle and solving angle |
|  |  | 10 |  |
| 21. |  | A1A1M1M1A1M1M1A1M1A1 |  |
|  |  | 10 |  |
| 22. | (b)Maths%20ms%20pp2%20q22(c)(i) x = 300 y = 100 (ii) Maximum profit  = (500 x 300) + (300 x 100) = Shs. 180000 | B1B1B1B1B3B1M1A1 | All inequalities vertically drawn and shaded |
|  |  | 10 |  |
| 23. |

|  |  |
| --- | --- |
| Nature (x = 1.12) | Nature (x = -1.79 |
| X | ‘1 | ‘1.12 | ‘2 | -2 | -1.79 | -1 |
|  | -1 | 0 | +10 | +2 | 0 | -1 |
| Sketch |  |  |  |  |  |  |
| Min. Pt | Max. Pt |

hence shown | M1M1A1M1A1M1A1B1M1A1 | accexp |
|  |  | 10 |  |
| 24. | (a) Completing table & graph

|  |  |
| --- | --- |
| Cumulative Frequency | Upper Limits |
| 2 | 30.5 |
| 7 | 40.5 |
| 14 | 50.5 |
| 23 | 60.5 |
| 34 | 70.5 |
| 42 | 80.5 |
| 47 | 90.5 |
| 50 | 100.5 |

Maths%20ms%20pp2%2024(b) (i) Q2 ≈ 62 (±1) marks (ii) Q3 = 75 and Q1 = 48 Interquartile range Q3 - Q1 = 75 - 48 = 27∴Interquartile deviation (Semi – Interquartile range) | B1P1C1B1M1A1M1A1M1A1 | tableAt least 6 pts vertically plotted smooth |
|  |  | 10 |  |