**SUNRISE MATHEMATICS PP1 MARKING SCHEME**

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|  |  |  |  |
|  | Numerator: 12 x 3 – 7/4 = 36 – 7/4 = 72 – 175 5 10 50 100 = -103 100Denominator: 11 – 68 x 4/9 = 11 – 272 = 891 - 1088 4 9 4 81 324 = -197  324 162 N/D= -103 x 324 = 16686 = 6836 100 197 9850 9850  50 = 3418 4925 | B1B1A1 |  Numerator Denominator  |
|  |  = 433 + 473 + 533 = 332 207 x 29= 9,634.003Total value 600,000 | M1M1A1 | Cubing and summing upMultiplying by 29C.A.O. |
|  | Amount received = 86.70 x 75 340 x 98 100 = Sh. 6401,338.44Total expenditure = 2,570,000 + 1,750,000 = Sh. 4,320,000The balance = 6401338.44 – 4320000 = Sh. 2,081,338.44No. of Rands = 2,081,388.44 x 95 27.95 100 = 70,744.86648 = 70745  | M1M1M1A1 | MultiplicationSubtraction Multiplication/DivisionC.A.O. |
|  | Time taken cycling = 60/30 = 2 hrsRemaining distance = 74 – 60 = 15kmTime taken walking = 15/15 = 1 hrTotal time spent = 2+1+1h 15 min = 3hr 15 minArrival time = 9.49+3hr 15min = 1304hrs | M1M1A1 | Totalling of the timeAddition of the timeExpressing in 24 hours |
|  |  S = (2n – 4) 90 S = (2x5 – 4) 90 = 540⁰= 2x + 100⁰ + 100⁰ + 2x – 40 + 2x - 10⁰ = 540 6x + 150⁰ = 540⁰ 6x = 390⁰ x = 65⁰ ∟ABC = 2x65 – 10 = 120⁰ | M1M1A1 | Formation of equationCollection of like termsC.A.O. |
|  | 0.007429 ½ = (7.429 X 10-3) ½  = (74.29 X 10-4) ½  = √74.29 X 10-2 = 8.6191 X 10-2 = 0.086191(8.6191 X 10-2)-1 = 8.6191-1 X 102 = 0.116 = -21.15 X 0.116 = -2.4534 | B1B1A1 | Square rootReciprocalCorrect product |
|  | A.S.F. = 40000000000cm2Area of village = 40000000000 x 2 x 3.2 = 256 000 000 000cm2 Area in km2 = 256 000 000 000 10000000000 = 25.6km2 | M1M1A1 | Area of the villageConversion into km2C.A.O. |
|  | 2X – 3Y = -175X + 6Y = -2 2 -3 x = -17 5 6 y -2 1 6 3 2 -3 x = 1 6 3 -17 27 -5 2 5 6 y 27 -5 2 -2 x = 1 -108 y 27 81 x = -4 y 3 x = -4 y = 3 | M1M1A1 | Pre-multiplication by determinant SimplificationCorrect values of x and y |
|  | Pupils Km days Milk100 20 30 144200 5 x 432No.. of days = 30 x 200 x 5/20 x 432 100 144 = 45 days | M1A1 | Compounding the ratioC.A.O. |
|  | = (23)⅔ x (54)3/2  (22)5/2 x (52)3/2= 22 x 56 25 x 53= 2-3 x 53= ⅛ x 125= 125 8= 15 ⅝ | M1M1A1 | Expressing in index formApplying laws of indicesExpressing as a fraction |
|  |  and  | M1 A1 |  |
|  |  | M1M1A1 |  |
|  | Area of triangle AOC = Area of sector = Area of unshaded region =  | M1M1 A1 |  |
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| --- | --- | --- |
| No  | Std f | Log  |
|  |  | **3.1162** |
| 0.02573 |  | .4104 |
|  |  | **1.5266** |
| 1.938 |  |  |
|  |  |  |
| 2.737 |  | 0.4374 |

 | M1 M1*M1**A1* |  |
|  |  and Length  | M1A1B1 |  |
|  |  E 10 D 13 F A 10 B C D 12 12 B C 13 B 10 D | B1B1 | Correct shapeCorrect + labeling dimensions |
| a) |  1 ½ y = 8 -⅔x y = 8 - ⅔ ÷ 1 ½ x 1 ½  y = 5 1/3 – 4/9x y = -4/9x + 5 1/3 M1 = -4/9 M2 = 9/4 = y – 3.5 = 9/4 x + 2 4y – 14 = 9x + 18 y = 9/4x + 8 | M1B1M1A1 |  |
|  b) | y + 5 = 9/4 x + 44y + 20 = 9x + 36-9x + 4y = 169x – 4y = 16 | M1A1 |  |
|  c) | 9x – 4y = -162x + 5y = -3318x – 8y = -32(18x + 45y = 297)  -53y = 265 y = -5but 2x + 5y = -33 2x + 25= -33 2x = -8 x = -4the lines meet at (-4,-5)  | M1M1M1A1 | Formation of simultaneous equationsAttempting to solve for yAttempting to solve for xC.A.O. |
|  i) |  A:B = 8/3:23/4  x 12 = A:B = 32:69B:C = 13/4:46/9 x 36 = B:C = 117:184A:B =32:69 (i) x 39B:C = 117:184 (II) X 23A:B = 1248:2691B:C = 2691:4232 = A:B:C = 1248:2691:4232 | M1M1A1 | Ratios express as whole numbersEqualizing the value of BRatios in simplified form |
|  ii) | Gross profit = 90,000 x 12 = 1,080,000Net profit = 1,080,000 – 12 x 27,000 = 756,000 | M1A1 | Gross profit – expensesNet profit |
|  iii) | A share = 1248 x 756000 8171 = Sh. 115 467.90No. of cows = 115 467.90 60000 = 1.92446457 = 1 cow | M1A1 | Division |
|  iv) | New value = 80 x 2451300 100 = 1,961,040 C gets = 4232 x 1961040  8171 = 1,015,680 (share) C gets = 756000 3 = Sh. 252,000Amount received by C = 1015680 + 252000 = Sh. 1,267,680 | M1M1A1 |  |
|  | SEE BELOW |  |  |
|  | (i) commission =Sh. 9000= Sh.44 000(ii) Commission earned = Marked price   *% Profit*  | M1M1 A1M1M1A1M1 A1M1A1 |  |
|  | C:\Users\user\Desktop\img20220602_21090901.jpg | B3 – 2 mks for each inequalityB3 for correct line ie bold or dotted and must be writtenM2 for a good scaleB2 – for region RNBMany stds dislike it hence a motivation for those who attempted |  |
|  | = x 90 = 210kmRemaining distance = 360 – 210 = 150kmAs = 90 + 110 = 200kmTime for meeting = = 0.75 hrs= 45 minsMeeting time = 10.35 + .45 11.20 a.m | B1B1M1A1 |  |
|  | (ii) Distance from A 210 + (0.75 x 90) = 210 + 67.5 = 277.5 km | M1A1 |  |
|  | (b) Time minibus arrived at B Time = = = 4 hrs= 8.15 + 4 hrs = 12.15 p.mTime taken by the tourist to arriveB = 12.15 pm – 10.30 a.m = 1 hr 45 min = 1 x 100= 175km∴ Home to B = 175kmHome to A = 360 – 175= 185km | M1M1A1B1 |  |
|  |  |  |  |
|  | (i) (ii)    (i) (ii)  | B1B1B1B1B1M1M1A1 (both )B1B1 |  |
|  |  (i) Width = Length  and  (ii) Remaining area  | M1M1M1A1M1A1M1A1M1A1 |  |
|  |  |  |  |
|  |  |  |  |

 QS 19



B1

B1 Centre of rotation

B1

B1 Mirror line

B1

B1 Coordinates

B1 mirror line

B2

B1 Coordinates