**FORM FOUR PAPER 1**

**MARKING SCHEME**

|  |  |  |  |
| --- | --- | --- | --- |
| **NO** | **WORKING** | **MARKS** | **REMARKS** |
| 1 | NumeratorDenominator | M 1M 1A 1 |  |
| 2 |  | M1M1A1 | SimplificationAddition of power |
| 3 | Volume of tank to be filled = Volume of bucket = Number of buckets =  | M 1M 1A 1 |  |
| 4 | C:\Users\user\Desktop\SCAN\img20190620_15050476.jpg | B 1B 1B 1 | ConstructionCorrect labellingComplete diagram |
| 5 | Side of the pavement = LCM  Least area   | B1M1 A1 |  |
| 6 | ........... (i) ......... (ii) ....... (iii) ....... (iv)From (iii)  | M 1M 1A 1B 1 |  |
| 7 | 1.

F:\COMPUTER\STEP UP SERIES\EXAM\T2 2019\SCAN\img20190621_17340010.jpg1.
 | B 1 constructing at BB 1 constructing at CB 1 perpendicular from A to BCB 1 |
| 8 | === 13.42 | B1M1A1 |  |
| 9 | 1. Time taken =
2. Average speed =
 | M 1A 1M 1A 1 |  |
| 10 |  are similarShaded region = area of  | M 1M 1A 1 |  |
| 11 |  | B1M1A1 |  |
| 12 | Inverse | B1M 1A 1 |  |
| 13 |  | M 1 A 1 |  |
| 14 |  | **b1****m1****a1** |  |
| 15 | 3420 French francs into Ksh. Commission =  Amount of Euros received =  = 520 Euros | M 1M 1A 1 |  |
| 16 | Let be the reciprocalOR  | M 1M 1 A 1 | Both values of m |
| 17 |  x 14 22.25cm1. I) Volume

Ratio Volume of whole coneVolume of small coneVolume of frustum = ii) mass of frustummass = mass in kg =  Volume of material remaining = Length of cube =  |  |  |
| 18 |   At intercept; At y intercept; 1. At point of intersection, y values are equal

Point of intersection (2, 5) | M 1A 1M 1A 1M 1A 1A 1M 1M 1A 1 |  |

19. (a)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  | 0 | 0.5 |  |  |  |  |  |  |  |  |  |
|  | 38 | 28.75 | 21 | 14.75 | 10 | 6.75 | 5 | 4.75 | 6 | 8.75 | 13 | 18.75 | 26 | 34.75 | 45 | 56.75 | 70 |

|  |  |  |
| --- | --- | --- |
| 19 | 1. Area =

=  1. Area =
 | M 1M 1A 1M 1M 1A 1 M 1A 1 |
| 20 | 1. Mirror line y=-x

Description: 81. I)

ii)reflection on line y=01. Area scale factor (−2)2 = 4

 Area of object=  =3cm2 |  |
| 21 |  1.
2. Area =
 | M 1M 1A 1B 1M 1A 1B 1M 1 M1A1 |  |
| 22 | Acceleration When Acceleration = 1. For minimum acceleration,

 1. Velocity

Acceleration is minimum when t = 0.2 s1. Distance =
 | M 1M 1 A 1M 1A 1M 1A 1M 1M 1A 1 |  |
| 23 | 1. Juma’s earnings before increase:

 112% → 8400 100% → 8400 x 100/112=7500Akinyi’s earnings before increase;3/5X 7500Increase in Akinyi’s earnings= 14100 – 8400 – 4500=1200% increase in Akinyi’s earnings=1200/4500 x 100= 26 2/3 =26.671. No. of bags bought

= 14100/1175= 12 bagsProfit = (1762.50 -1175)x12= 7050Ratio 5700 : 8400 = 19 :28Profit for Akinyi : 7050 x 19/47 =2850Total earning for Akinyi:5700+2850= 8550 |  |  |
| 24 | 1. At turning points;

 When Point 1 When Point 2 1.

 Gradient of normal, At ,  Slope =  | B 1M 1 M 1A 1B 1B 1B 1M 1M 1A 1 |  |