|  |  |  |
| --- | --- | --- |
| **SNO:** | **WORKING** | **MARKS** |
| 1 | √  √[]  = | M1  M1  A1 |
|  |  | 03 |
| 2 | ASF ==  LSF = √ =  VSF= ()3 = 8/27  Vol= x162  =48cm3 | M1  M1  A1 |
|  |  | 03 |
| 3 | 0.5 x14x8 sin θ=28m2  Sin θ=0.5  θ=Sin-1 (0.5)  Ө =30° | M1  A1 |
|  |  | 02 |
| 4 | Tuesday-Thursday=24x3=72hours  Monday=2400-0445=19hours 15minutes  Friday=18hours 45minutes  Total time=72+19.25+18.75=110hours  Time lost=0.5x110=55minutes  1845hrs-55minutes=1750hours  =5.50pm | B1  M1  A1 |
|  |  | 03 |
| 5 | 25X54X73X(2X52)  2X52=50  (26X56X73)1/3  =22X52X7  =700 | M1  M1  A1 |
|  |  | 03 |
| 6 | Bus═>4x  5  matatu═>2/3x1/5x=2/15x  walking═>1-(4/5+2/15)  =1/15X  4/5X=1/15X+55  11/15X=55  X=75Km | M1  M1  A1 |
|  |  | 03 |
| 7 | N=9t2-25a2=(3t-5a)(3t+5a)  D=6t2+19at+15a2=6t2+9at+10at+15a2  =3t(2t+3a)+5a(2t+3a)  =(3t+5a)(2t+3a)  N=(3t-5a)(3t+5a)  D ( 3t+5a)(2t+3a)  =3t-5a  2t+3a | M1  M1  A1 |
|  |  | 03 |
| 8 | ; | M1  M1  M1  A1 |
|  |  | 04 |
| 9 | 3x+x-20=1800  4x=2000  X=500  n=3600=3600  ext 300  12sides | M1  M1  A1 |
|  |  | 03 |
| 10(a)  (b) | 11944 Sterling pounds | M1  A1  M1  A1 |
|  |  | 04 |
| 11(a)  (b) | HCF of 608 and 264  608 = 2 x 2 x 2 x 2 x 2 x 19  264 = 2 x 2 x 2 x 3 x 11  HCF = 23 = 8  Maximum distance between the posts = 8m  Number of posts=2(608+264)÷8  =218posts | A1  M1A1 |
|  |  | 03 |
| 12 |  | M1  M1  A1 |
|  |  | 03 |
|  |  |  |
| 13 | Selling price =x 8000  =sh6400 | M1  M1  A1 |
|  |  | 03 |
| 14 | *x*= 45 000  *y*= 36 600  Chui’s salary =Kshs 36,600 | M1  M1  A1  A1 |
|  |  | 04 |
| 15 |  | M1  M1  A1 |
| 16 |  | M1  M1  A1 |
|  |  | 03 |
| 17(a)  (b)  (c) | Surface area of hemisphere=2π r2  S.A= 2xπ x1.52  14.14cm2  Surface area of cylindrical part  2π rh  S.A=2xπ xrxh  2  T.S.A=14.14+61.29  =75.43cm2  Volume of hemispherical part=2/3 πr3  =2/3xπx1.53  =7.071cm3  Volume of cylindrical part=πr 2 h  =πx1.52 x6.5  =45.96cm3  T. volume=7.069+45.96  =53.04cm3  Density=M/v  =10/53.04  =0.1886g/cm3 | M1  M1  M1  A1  M1  A1  M1  A1  M1  A1 |
|  |  | 10 |
| 18(a)  (b)  (c)  (d) | Time =  =  =  =  Distance covered by bus at 7.45am  =  = = hrs    =    ∴  Time taken by car =  Time of travel of bus 2 ½ hrs + ¾ hrs  =3 ¼ hrs  Distance travelled = 80 x = 260  Distance from Eldoret = 300 – 260 = 40km  Distance travelled by car in  = 120  = 144km  ∴ Distance from Nairobi is 300 – 144  =156km | M1  A1  M1  M1  M1  A1  M1  A1  M1  A1 |
|  |  | 10 |
| 19(a) (i)  (ii)  (iii)  (b)  (C)  (d) | **AB = b** - **a**  **OC** =  **BD = a - b**  **OX**=**b**(1-h)+  **OX**=**b**(1-h)+  **OX**=+  **a**h =  2 h = k  **b** k=**b** (1-h)  k=1 - h  (2 h)=1 - h  h =1 ═> h =  K=2() =  K =  ***a***+ | A1  A2  A1  A1  M1  M1  M1  A1  A1 |
|  |  | 10 |
| 20 | AB=5cm, BC=8cm  ∠ABC=60°  AC=7.0 ± 0.1cm  ∠BAC=83±1°  ⊥ Bisectors of any 2 sides  centre o marked  ⊥Bisector of BC from A  AD measured 4.3± 0.1  Area=½ x 8 x 4.3  =17.2cm2 | B1  B1  B1  B1  B1  B1  B1  B1  M1  A1 |
|  |  | 10 |
| 21(a)  (b)  (c) | Dormitory located  Tank located  Borehole located  Library located  Correct scale  Distance=20x8  =160km  Bearing =270°± 2°  Total distance walked  = 100+120+160  =380km | B1  B1  B1  B1  S1  M1  A1  A1  B1  A1 |
|  |  | 10 |
| 22(a)  (b) | Modal class=240-249   |  |  |  |  | | --- | --- | --- | --- | | Amount  (ksh) | (X)  mid point | (f) frequency | fx | | 210-219 | 214.5 | 5 | 1072.5 | | 220-229 | 224.5 | 13 | 2918.5 | | 230-239 | 234.5 | 23 | 5393.5 | | 240-249 | 244.5 | 32 | 7824 | | 250-259 | 254.5 | 26 | 6617 | | 260-269 | 264.5 | 20 | 5290 | | 270-279 | 274.5 | 15 | 4117.5 | | 280-289 | 284.5 | 12 | 3414 | | 290-299 | 294.5 | 4 | 1178 | |  |  | Σf=150 | Σfx=37825 | | Mean=Σfx =37825 = ksh 252  Σf 1 50 | | | |   mso8C63A | B1  B1 for X  B1 for fx  M1  A1  S2  P2  L1 |
|  |  | 10 |
| 23  (a)  (b)  (c)  (d) | |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | -3 | -2 | -1 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | |  | -11 | -3 | 3 | 7 | 9 | 9 | 7 | 3 | -3 | -11 |   9E09A394  x 0 2  2    X=-0.7 or 4.7 | B2  S1  C1  P1  M1  L1  A1  B2 |
|  |  | 10 |
| 24(a)  (b)  (c)  (d)  (e) |  | M1  A1  A1  M1  A1  M1  M1  A1  M1  A1 |
|  |  | 10 |