**MATHEMATICS**

**FORM 2**

**MID TERM 1 EXAM, 2021**

1. Use tables to evaluate. (3mks)

3.45 x 16.7

 31.5

NUMBER STD FORM LOG

**3.45 3.45 X 01O 0.5378**

**16.7 1.67 X 101 1.22227-1**

 **1.7605**

**31.5 3.15 x 101 1.4983-**

 **0.2622 x1/2**

**1.3524 1.35 x 10o 0.1311**

**=1.3526**

1. Solve for x in each of the following equations. (3mks)
2. 3(2x-5) = 27

**3 (2x -5) = 33**

**2x-5=3**

**2x=8**

**2 2**

**X=4**

1. 34x ÷ 3 -7=315  (3mks)

**34x- -7=315**

**34x+7=315**

**4x+7=15**

**4x=15-7**

**4x=8**

**4 4**

**X=2**

1. Use reciprocals tables to evaluate (3mks)

 7 + 1

 0.0125 12.5

**1/0.0125 + 1/12.5**

**560x7 + 0.08**

**3920+0.08**

**3920.08**

1. A metallic cuboid measuring 16cm by 8cm by 4 cm was melted . The material was then used to make a cube. What was the length of the cube? (3mks)

**16x8x4=512cm3**

**3√ 5/2=8cm**

1. Simplify

3

27x3y9 (3mks

X6y3

 **3xy3**

 **X2y**

**3y2**

**X**

**3y2**

X

**Or 3y2x-1**

1. Find the equation of the line through the points A (2, 5) and B(3, 11 ) (3mks)

**M=11-5=6**

 **3-2 1**

**=6**

**Y=6**

**X**

**A (2,5 c(x,7)**

**y/x=y-5 =6**

**x-2**

**y-5=6(x-2)**

**y-5=6x-12**

**y=6x-7**

**y=6x-7**

1. Determine the equation of the line perpendicular to the line whose equation is y=-5x+3 and passes through the point (3, 2). (3mks)

**y-5x+3**

**m1=-5**

**m1xm2=-1**

**-5/-5m2=1/5**

**M2=1/5**

**y-2=1**

**x-3=5**

**5(y-2)=x-3**

**5y-10=x-3**

**5y=x-3+10**

**5y=x+7**

**Y=1/5x+7**

1. A(-5, -2), B(-2, -5) and C(-12, -2) are vertices of a triangle. Find the image of the triangle when it is reflected in :
2. The line y=-x (4mks)

**A i(4,2.5)**

**B’ (10,1)**

**C ‘(4,6)**

1. The line y= x (4mks)

**A “(-4, -2.5)**

**B “(-12, -2)**

**C “(-2, -5)**

1. Find the area in hecatares of a coffee filed whose measurements are entered in a filed book as shown below. Take xy=200m as the baseline. (8mks)

 X

 180 40 to Q

 To R 80 140

 To S 160 100

 40 100 to P

 X

 P

 100 Q

 1 2 40 320

 Y

 O 40 60 40 404

 6 5

R

 S

**Area 1= ½ x 40 x 100=2000m2**

**Area 2= ½ (100+40)140=9000m2**

**Area 3=1/2 x 20x40=400m2**

 **12200m2**

**Area 4=1/2 \* 60x80=2400m2**

**area = ½(160 + 80**

**0 40=4800m2**

**Area**

1. Use the reciprocal tables and square root to evaluate. (4mks)

 0.1 + 0.498

 0.0351

 **1 0.1 + 49.8x10-2**

 **0.0351**

**(28.490)0.1 + √ 49.8x √10-2**

**2.849 + 7.057x10-1**

**2.849+0.7057**

**=3.5547**

1. Two men each working for 8 hours a day, can cultivate an acre of land in 4 days. How long would 6 men each working in 4 hours a day take to cultivate 4 creas? (3mks)

**Men Hours Days acres**

**2 8 4 1**

**6 4 ? 4**

**2=4 2/6x44x8/4x4/1**

**24/3=8 days**

1. The sum of interior angles of a regular polygon is 1080o. Find the size of each exterior angle. (3mks)

**(2n-4)90**

**(2n-4)90=1080**

**180n-360=1080**

**180n=1080+360**

**180n=1440**

**180 180**

**N=8**

**1080/8=135**

**180-135=45o**

**Or**

**360/8=45o**