1. Which one of the following is eight million four hundred and seventy six thousand eight hundred and thirty less sixty seven thousand and forty in symbols?

A. 8476830

B. 8409430

C. 8329890

- D. 8409790
- 2. Round off 4289608 to the nearest thousand.

A. 4289000

B. 4290608

C. 4290000

- D. 4289700
- 3. What is quarter of $\sqrt{1296} \times \left(6\frac{4}{3}\right)^2$

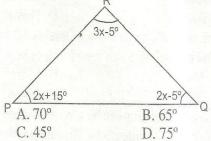
A. 484

B. 1936

C. 264

D. 968

4. Find the value of angle QPR



5. What is the value of: $6 (24 - 18) + 6 \times 4$

A. 30

B. 25

- C. 10 D. 28
 A certain piece of work can be completed by
- 9 men for a duration of 60 days. How many men had to be laid off in order for the work to be done and completed within 180 days?

A. 3 C. 4 B. 6 D. 2

7. Which one of the following statements is true about a parallelogram?

A. The diagonals are equal

B. All the interior angles are each 90°

C. Has two pairs of parallel sides

D. Diagonals bisect the angles

8. A cylindrical tank has a base area of 6.16m² and a height of 3m. Calculate the capacity of the tank in litres.

A. 18.48L

B. 18480L

C. 1848L

D. 184800L

CAT 003

9. In a certain school there are three hundred and eighty six less boys than girls. If there are six hundred and seventy two boys in the school, how many pupils are in that school altogether?

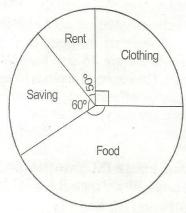
A. 1058

B. 1730

C. 958

D. 1444

10. The circle graph below shows how Phoebe spends her monthly income.



If she spends sh. 32000 on food, how much more does she spend on clothing than rent?

A. Sh. 12000

B. Sh. 18000

C. Sh. 10000

D. Sh. 8000

41. A piece of land 7.25ha is to be divided into 0.125ha plots. If two houses were to be built in each plot, how many houses would be built?

A. 116

B. 29

C. 58

D. 11.6

12. The area of a trapezium is 288cm². Its height is 12cm one of its parallel sides is 30cm. What is the length of the other parallel side?

A. 18cm

B. 36cm

C. 9cm

D. 12cm

13. What is the value of: $\frac{3}{4} \left(\frac{1}{2} + \frac{2}{5} \div \frac{1}{3} \right) - \frac{1}{5} \times \frac{3}{8}$

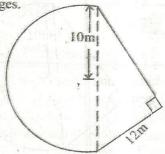
A. $2\frac{7}{10}$

B. $2\frac{1}{40}$

C. $1\frac{19}{20}$

D. $1\frac{1}{5}$

14. The following diagram shows a kitchen garden consisting of a semi circle and two straight edges.



If the owner intends to fence it using five strands of barbed wire, what is the length of the wire needed. (Take $\pi = 3.14$)

A. 454m C. 297m B. 140m

D. 1710m In a sack there are mangoes, bananas and apples. There are 45 less bananas than mangoes. The number of apples is 35 less than the number of mangoes. If there are 30

bananas, how many apples are there? A. 65 C. 105 ·

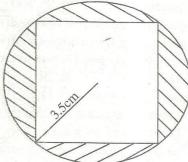
D. 40

Construct triangle JKL given that JK= 5.5cm, angle LJK = 30° and angle JLK = 75°. What is the measure of line KL?

> A. 5.5cm C. 2.9cm

B. 3.8cm D. 4.2cm

17. In the figure below, a square is enclosed in a circle of radius 3.5cm.



What is the area of the shaded part?

(Take $\pi = \frac{1}{2}$ A. 38.5cm²

B. 14cm²

C. 24.5cm²

D. 26.25cm²

Dan receives a salary of sh.30000 per month. He uses $\frac{3}{20}$ of it for rent, $\frac{2}{5}$ for school fees and saves the rest. How much more does he save than use on rent?

> A. Sh. 7500 C. Sh. 13500

B. Sh. 18000

D. Sh. 9000

CAT 003

What is the value of m in the equation: 2m - 3 + 2m = 5

B. 1

C. $1\frac{1}{2}$

D. 2

Which number when divided by 12, 20 or 36 the remainder is always 8?

A. 180

B. 172

C. 184

D. 188

The table below shows the number of pupils absent in a class of 46 pupils.

Day	Mon	Tue	Wed	Thur	Fri
Boys	2	5	3	1	3
Girls	1	2	3	4	5

On which day was the number of purils present highest?

A. Friday

B. Monday

C. Tuesday

D. Thursday

The area of a square plot of land is 3.24 a es. Find the perimeter of the plot in metres?

A. 36m

B. 144m

C. 72m

D. 324m

23. A floor measuring 8m by 10m is covered with square tiles of side 20cm. How many tiles are needed to cover the floor completely?

A. 200

B. 2000

C. 75

D. 750

Jamil bought the following items from the

 $3\frac{1}{2}$ kg of rice at sh. 90

3 bars of soap @ sh 120

 $1\frac{1}{2}$ kg of beans for sh. 210

 $2\frac{1}{2}$ litres of cooking oil @ sh.320

3 rolls of tissue for sh.105

How much balance did he get if he paid sh.2000?

A. Sh. 1790

B. Sh. 1720

C. Sh. 210

D. Sh. 280

What is the value of: $2t(g-2)^2$

where g = k - 3, k = 8 and t = 3g + 3

A. 24 C. 144

D 12

26. A $5\frac{5}{6}$ hr meeting started 15 minutes late. If the meeting ended at 4.10pm, at what time was the meeting supposed to start in 24hr clock system?

A. 10.20am

B. 10.05am

C. 1020hr

D. 10.35am

27. Which one of the following measurements can be used to draw a right angled triangle?

A. 1cm, $2\frac{2}{5}$ cm, $2\frac{3}{5}$ cm

B. $1\frac{4}{5}$ cm, $3\frac{1}{5}$, 5cm

C. $\frac{1}{5}$ cm, $\frac{3}{5}$ cm, $\frac{4}{5}$ cm

D. $\frac{3}{5}$ cm, $\frac{4}{5}$ cm, 5cm

28. Chege paid sh. 85000 for a sofa set after getting a discount of 15%. What was its marked price?

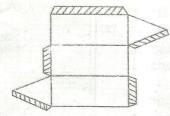
A. Sh. 12750

B. Sh. 72250

C. Sh. 100000

D. Sh. 112750

29. Below is a net of a solid



Which one of the following solids can be formed from the net?

A. Triangular pyramid

B. Rectagular prism

C. Rectagular pyramid

D. Triagular prism

30. Ng'endo is paid a monthly salary of sh. 6500 and a 5% commission on sales of goods above sh. 20000. In the month of January she sold goods worth sh. 200000. How much money did she earn that month?

A. Sh. 16500

B. Sh. 15500

C. Sh. 10000

D. Sh. 17500

31. Three sides of an equilateral triangle are represented by (3x + 4)cm, (5x - 8)cm and (6x - 14)cm. What is the perimeter of the triangle?

A. 6cm

B. 22cm

C. 66cm

D. 18cm

CAT 003

32. What is the total value of digit 8 in 456. 2893?

A. 0.08

B. 0.0008

C. 0.008

D. 0.28

33. Simplify the algebraic expression below 6(2r+3) + 4r - 2

2(2r+2)+6r+6

A. 16r + 16

B. 8r + 8

10r + 10

5r + 5

C. 2r + 8

 $0.1\frac{3}{}$

r + 8

34. A section of the Nairobi-Nakuru highway was représented by 8cm on a map. If the actual distance was 160km, what was the scale used?

A. 1: 2000

B. 1:20000

C. 1: 200000

D. 1:2000000

35. Ongosi paid sh. 600 for a book after a discount of 20%. How much would he have paid had he been given a discount of 25%?

A. 25%

B. Sh. 510

C. Sh. 570

D. Sh. 562.50

36. What is $5 \div 4$ written as a percentage.

A. 80%

B. 54%

C. 75%

D. 125%

37. Rudisha kept sh. 200000 in a bank which gave simple interest at the rate of 10% p.a. How much will he have in the bank by the end of the second year?

A. Sh. 40000

B. Sh. 242000

C. Sh. 240000

D. Sh. 42000

38. The temperature of a place dropped by 18°c. If the initial temperature was 12°c, what is the reading after the drop?

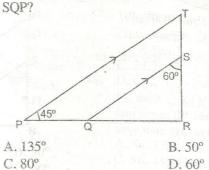
A. 6°c

B. -6°c

C. -12°c

D. 30°c

39. In the figure below PQR is a straight line and PT is parallel to QS. Angle TPR = 45° and angle QSR = 60°. What is the size of angle



40. The ratio of boys to girls in a class is 5:4. If there are 5 more boys than girls, how many pupils are in the class?

A. 45

B. 25

C. 20

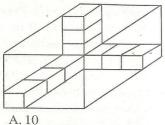
D. 55

41. Express 54km/hr into m/s

A. 54m/s

B. 10m/s

- C. 25m/s
- D. 15m/s
- **42.** How many more cubes are needed to fill the box below



A. 10 C. 44 B. 54 D. 64

43. Electric poles were fixed on both sides of a road 2km long at interval of 20m. How many poles were fixed?

A. 202

B. 200

C. 198

D. 196

44. A lorry weighs 1.2 tonnes when empty. It was loaded with forty 90kg bags of maize and eight 50kg bags of beans. What is the mass of the loaded lorry in tonnes?

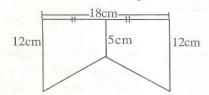
A.4

B. 5.2

C. 5200

D. 4.8

45. What is the area of the figure drawn below?



A. 216cm²

B. 153cm²

C. 90cm²

D. 63cm²

46. What is the value of: $\sqrt{1\frac{9}{16}}$

A. $1\frac{3}{4}$

 $B.1\frac{1}{5}$

C. $1\frac{1}{4}$

D. $1\frac{1}{16}$

CAT 003

47. The height of 8 boys were recorded as follows: 1.2m, 1.4m, 1.8m, 1.3m, 1.5m, 1.6m, 1.4m, 1.7m. What was the modal height?

A. 1.49m

B. 1.5m

C. 1.45m

D. 1.4m

48. To what ratio must 42 be decreased to make it 28?

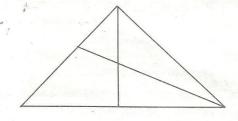
A. 3:2

B. 1:2

C. 2:3

D. 2:1

49. How many triangles can be counted from the figure below?



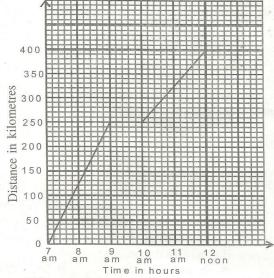
A.9

B. 5

C. 8

D. 7

50. The graph below represents a motorist's journey from town X to town Y, 400km away



What was the motorist's average speed for the whole journey?

A. 80km/h

B. 72km/h

C. $66\frac{2}{3}$ km/h

D. 100km/h