

# K.C.P.E EXCEL SERIES

**STD. 8 TERM 3 - 2014**

## MATHEMATICS

**READ THESE INSTRUCTIONS CAREFULLY**

- 1 Use an ordinary pencil only.
- 2 Make sure that you have written on the answer sheet.

**Time: 2 Hrs**

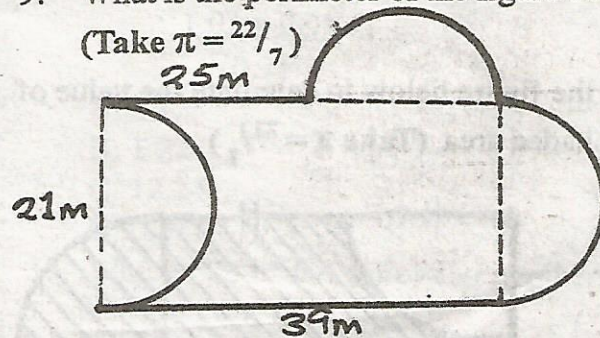
I. YOUR NAME

II. YOUR INDEX NUMBER

III. NAME OF YOUR SCHOOL

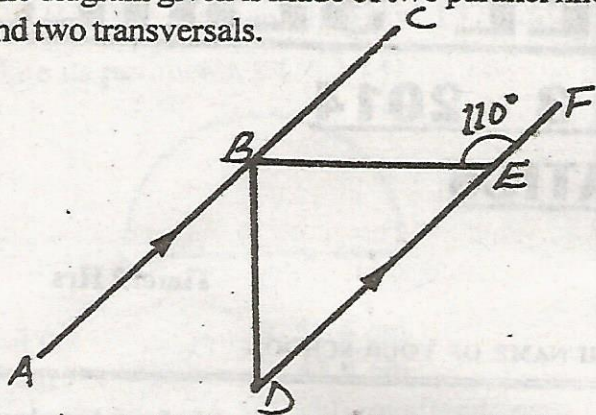
1. Write 770707.47 in words.  
A. Seven hundred and seventy thousand, seven hundred and seven and seventy-seven hundredths  
B. Seven hundred and seventy thousand, seven hundred and seven and forty-seven hundredths  
C. Seven hundred and seventy thousand, seven hundred and seventy and forty seven hundredths  
D. Seven hundred and seven thousand, seven hundred and seventy and forty seven hundredths
2. What is 7.985 rounded off to 2 decimal places?  
A. 7.980                      B. 7.98  
C. 7.99                        D. 7.89
3. What is the next number in the series; 101, 99, 96, 91, 84, \_\_\_\_\_  
A. 75                            B. 77  
C. 71                            D. 73
4. Kazungu had cows and goats in the ratio 5 : 7. There were 12 more goats than cows. During a dry season, he sold 27 goats while 5 cows died. What was the new ratio of goats to cows?  
A. 3 : 5                        B. 1 : 1  
C. 5 : 7                        D. 5 : 3
5. 15 men are employed to do a certain job in 16 days. How many more men would be employed if the work is to be done in 12 days?  
A. 5                              B. 4  
C. 20                            D. 3
6. Mtondo went to a shop and bought;  
2 - 2 kg tins of fat at Sh. 98.00  
5 bars of soaps at Sh. 22.00  
 $1\frac{1}{2}$  kg sugar @ Sh. 125.00  
 $1\frac{1}{4}$  kg rice @ Sh. 80.00  
3 match boxes for Sh. 8.00

- If she settled the bill with four two hundred shilling notes, how much was her balance?  
A. Sh. 89.50                      B. Sh. 198.50  
C. Sh. 98.50                      D. Sh. 189.50
7. Latema bought 120 L of milk in 4 dl packets. How many packets did he buy?  
A. 30                              B. 3  
C. 330                              D. 300
8. Omondi deposited Sh. 72000 in a bank that pays interest at a rate of 2.5%. He withdrew all his money after 9 months. How much was the interest?  
A. Sh. 1350                        B. Sh. 76,050  
C. Sh. 73 350                      D. Sh. 4050
9. What is the perimeter of the figure below?



- A. 173 m                        B. 112 m  
C. 152 m                        D. 148 m
10. A map is drawn to a scale of 1 : 30000. Calculate the drawing area of a rectangular plot 1350 m long and 930 m wide?  
A. 139.5 cm<sup>2</sup>                      B. 13.95 cm<sup>2</sup>  
C. 4.5 cm<sup>2</sup>                        D. 12.95 cm<sup>2</sup>
11. Mworua buys a suit after every 6 months, Kamamu after every 12 months. If they all buy each a suit in April 2004, when will they buy suits together again?  
A. April 2006  
B. April 2000  
C. April 2005  
D. April 2008

12. The diagram given is made of two parallel lines and two transversals.

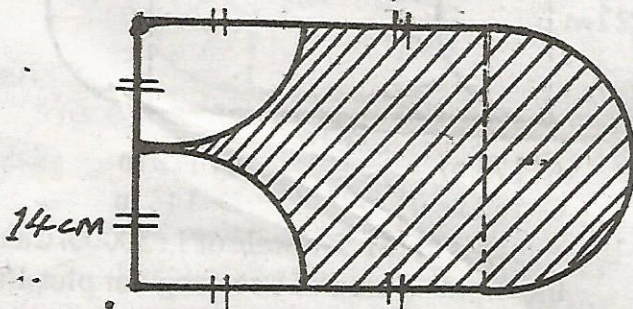


If the angle  $BEF = 110^\circ$  and line  $BD$  bisects angle  $ABE$ , calculate the value of reflex angle  $BDE$ .

- A.  $145^\circ$   
 B.  $315^\circ$   
 C.  $295^\circ$   
 D.  $305^\circ$
13. What is the value of  $x$  in:

$$\frac{2(x-1)}{3} + \frac{x}{4} = \frac{x+2}{2}$$

- A. 4  
 B.  $\frac{4}{5}$   
 C. 5  
 D. 3
14. Use the figure below to calculate the value of the shaded area. (Take  $\pi = \frac{22}{7}$ )

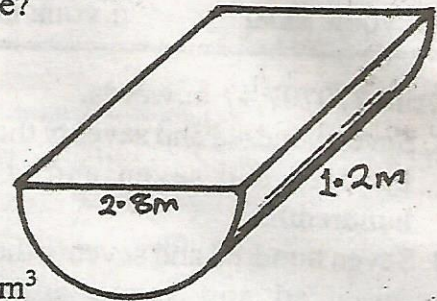


- A.  $305 \text{ cm}^2$   
 B.  $476 \text{ cm}^2$   
 C.  $392 \text{ cm}^2$   
 D.  $342 \text{ cm}^2$
15. Lotode started a journey at 3.05 p.m on Saturday. If the journey took 18 hrs 40 min, on which day and time did he complete it?
- A. Sunday 9.45 p.m -  
 B. Friday 9.45 a.m  
 C. Sunday 9.45 a.m  
 D. Monday 9.45 a.m

16. Mwenda bought a bicycle whose marked price was Sh. 7200. He later sold it for Sh. 7100. How much profit did he make if he had been allowed a 10% discount on the marked price?

- A. Sh. 620  
 B. Sh. 720  
 C. Sh. 648  
 D. Sh. 710

17. The solid given is semi-cylindrical. Calculate its volume?



- A.  $7.392 \text{ m}^3$   
 B.  $36.96 \text{ m}^3$   
 C.  $4.696 \text{ m}^3$   
 D.  $3.696 \text{ m}^3$
18. A farmer planted trees all round his square plot at intervals of 3 m. If he planted a total of 120 trees, calculate the area of his plot.
- A.  $8100 \text{ m}^2$   
 B.  $1600 \text{ m}^2$   
 C.  $9000 \text{ m}^2$   
 D.  $7200 \text{ m}^2$
19. Murigu scored the following marks in a CAT.

Subject	Eng	Kisw	Maths	Scie	SS
Marks out of 30	22	19	28	25	26

If this was represented in a pie chart how bigger would be the angle for Maths than Kiswahili?

- A.  $57^\circ$   
 B.  $18^\circ$   
 C.  $27^\circ$   
 D.  $84^\circ$
20. Zulu covered a distance of 900 m in a race at a time of 3 min. Calculate his speed in km/hr?
- A. 15 km/hr  
 B. 18 km/hr  
 C. 36 km/hr  
 D. 54 km/hr
21. In a class, the ratio of boys to girls is 4 : 7 respectively. If there are 12 more girls than boys, what is half the number of boys in the class?
- A. 44  
 B. 16  
 C. 22  
 D. 8

22.

Subject	Eng	Kisw	Maths	Scie	SST
Marks out of 20	14	16	-	12	10

The Table shows Mutimo's marks in a CAT. If the average score was 14.4, what angle would represent his marks in Maths in a pie chart?

- A.  $72^\circ$     B.  $50^\circ$     C.  $100^\circ$     D.  $200^\circ$

23. Soi gave  $\frac{1}{3}$ , Koech  $\frac{1}{4}$  and Mwangi  $\frac{2}{5}$  of the remainder in order to buy a ball. After their contribution, they noticed that they still needed Sh. 320 to buy the ball. What was the price of the ball?

- A. Sh. 960                      B. Sh. 1280  
C. Sh. 1920                     D. Sh. 1500

24. The surface area of a closed cube is  $216 \text{ cm}^2$ . Calculate the total lengths of its edges.

- A. 96 cm                      B. 48 cm  
C. 108 cm                     D. 72 cm

25. An empty carton weighs 1.2 kg. It is loaded with 30 sachets of Omo and its total weight becomes 2400 g. Calculate the average weight of each sachet of Omo?

- A. 4 g    B. 40 g    C. 400 g    D. 0.4 g

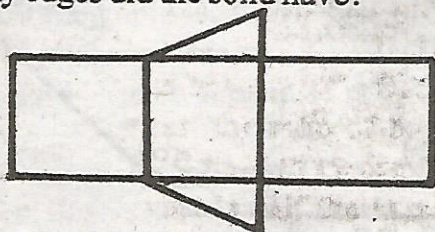
26. Sossion is a salesman who earns a basic salary of Sh. 14200. He is also given a  $3\frac{1}{2}\%$  commission on all the sales he makes above Sh. 25000. In one month, he sold goods worth Sh. 110,000. Calculate his total earnings.

- A. Sh. 3150                      B. Sh. 17,350  
C. Sh. 3850                     D. Sh. 17,175

27. In a birthday party Lukia gave twice as much as Tina. Rosa gave  $\frac{1}{2}$  of the total. Lukia and Tina gave if Tina gave Sh.  $x$ , how much did the three contribute altogether?

- A.  $3\frac{1}{2}x$                       B.  $4.5x$   
C.  $2x + 1\frac{1}{2}$                     D.  $3.5x$

28. The given net was folded to form a solid. How many edges did the solid have?



- A. 14    B. 12    C. 9    D. 8

29. Which one of the following is the probable value of  $y$  in the inequality;

$$\frac{3}{4}y - 1 > \frac{1}{2}y + 2$$

- A. 9    B. 12    C. 11    D. 13

30. What is the sum of 6.943 and 0.065 correct to 2 decimal places?

- A. 6.01  
B. 7.01  
C. 6.90  
D. 7.10

31. What is three quarters the product of the mode and median of 3, 9, 4, 3, 5, 8, 3?

- A. 12                              B. 8  
C. 9                                D. 15

32. The number of pupils in a school decreased in the ratio 5 : 6. If this was after 7 pupils transferred how many pupils were left?

- A. 42                              B. 14  
C. 28                              D. 35

33. Mbole deposited Sh. 48000 in a bank that pays simple interest at a rate of 10% p.a. How much more would be his interest would he have deposited the money at a compound interest of 10% for the same period of 2 yrs?

- A. Sh. 9600  
B. Sh. 58080  
C. Sh. 480  
D. Sh. 9120

34. Work out a half the value of:

$$\frac{1.02 \times 0.48}{(0.2)^2}$$

- A. 6.12  
B. 1.224  
C. 12.24  
D. 0.612

35. Which one of the following numbers has the least value?

- A. 1.01101  
B. 1.10110  
C. 1.01110  
D. 1.1101

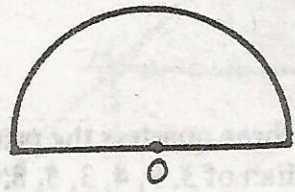
36. Nasri repacked 2.4 tonnes into 250 g packets. He then packed the packets into cartons each holding 25 packets. How many cartons did he pack?

- A. 9                                B. 240  
C. 272                            D. 384

37. 27<sup>th</sup> January 2008 was on a Monday. What day was 7<sup>th</sup> April the same year?

- A. Tuesday  
B. Thursday  
C. Saturday  
D. Monday

38. If the area of the given figure is  $157 \text{ cm}^2$ , calculate its perimeter. ( $\pi = 3.14$ )



- A. 31.4 cm
- B. 51.4 cm
- C. 47 cm
- D. 41.4 cm

39. Three clocks are set to raise alarm after 45 sec, 50 sec and 1 min respectively. If they raise the alarm at 8.05 p.m for the first time, at what time will they raise the alarm together again?

- A. 9.05 p.m
- B. 8.35 p.m
- C. 8.20 p.m
- D. 8.35 p.m

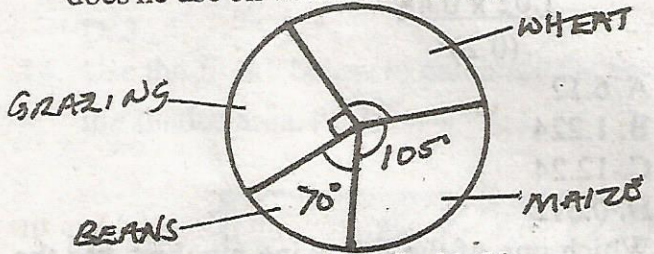
40. Work out:  $10^2 - 11^2 + 8^2 \div 2$

- A. 9
- B. 8
- C. 13
- D. 11

41. How many groups of hundredths are there in the value of digit 3 in the number 7.2365?

- A. 0.3
- B. 30
- C. 3
- D. 300

42. The given pie-chart shows how Rugere used his 108 ha piece of land. How many more hectares does he use on wheat than beans?

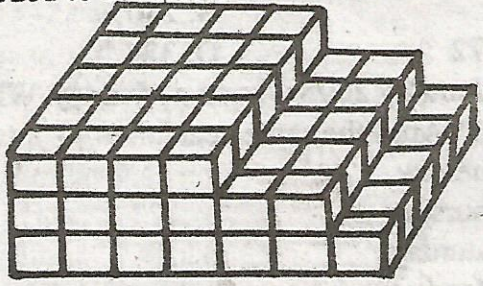


- A. 7.5 ha
- B. 11.5 ha
- C. 6 ha
- D. 9 ha

43. The average weight of 6 boys is 49.5 kg. The first four boys weigh 55 kg, 49 kg, 38 kg and 61 kg. The last two boys are such that the heavier one is 2kg more than the lighter. Calculate the weight of the lighter boy?

- A. 48 kg
- B. 94 kg
- C. 47 kg
- D. 46 kg

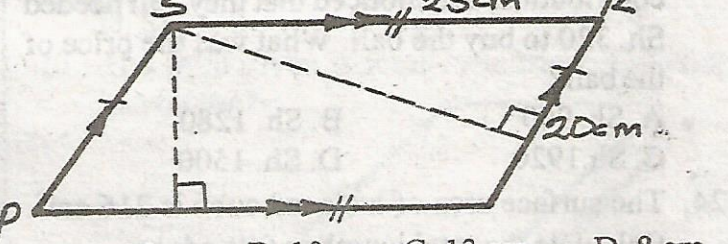
44. In the given stack, how many more cubes are needed to complete the stack?



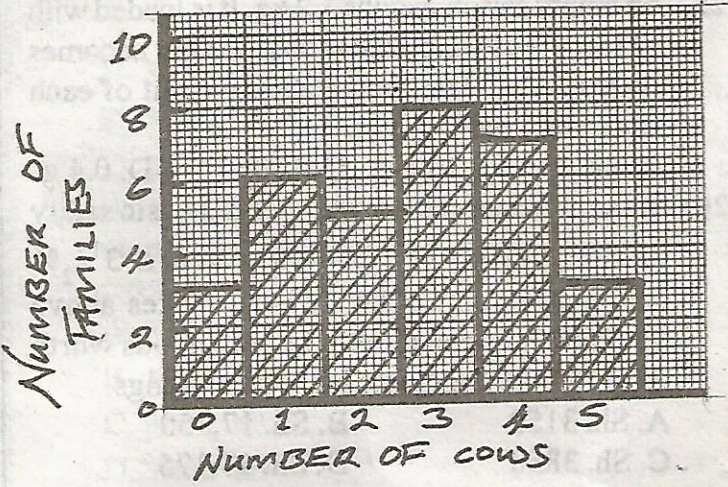
- A. 20
- B. 35
- C. 25
- D. 105

45. The temperature of ice was  $8^\circ\text{C}$ , it was placed on fire and gained temperature at a rate of  $6^\circ\text{C}/\text{min}$ . What was its temperature at  $3\frac{1}{2}$  min?

- A.  $13^\circ\text{C}$
- B.  $29^\circ\text{C}$
- C.  $33^\circ\text{C}$
- D.  $11^\circ\text{C}$



- A. 15 cm
  - B. 10 cm
  - C. 13 cm
  - D. 8 cm
47. The bar graphs shows the number of cows owned by each family in a village.



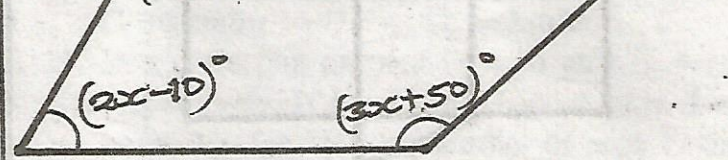
How many cows are there in the village altogether?

- A. 15
- B. 54
- C. 37
- D. 83

48. Which one of the following sets will NOT form a right-angled triangle?

- A. 1.5, 2.0, 2.5
- B. 9, 16, 25
- C. 3.5, 12, 12.5
- D. 4, 7.5, 8.5

49. Calculate the difference between the largest and the smallest angle in the given figure?



- A.  $100^\circ$
- B.  $110^\circ$
- C.  $90^\circ$
- D.  $80^\circ$

50. Construct triangle ABC in which  $AB = 7.5 \text{ cm}$ ,  $BC = 5 \text{ cm}$  and angle  $ABC = 110^\circ$ . Draw a circle such that it touches the sides of the triangle. Measure its radius.

- A. 1.5 cm
- B. 2.0 cm
- C. 1.8 cm
- D. 3.5 cm