

FRONTRUNNER 007

# FRONTRUNNER EXAM

## STANDARD SIX 2021

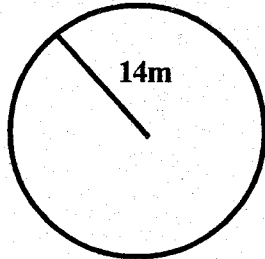
### MATHEMATICS

6

Time: 2 Hrs

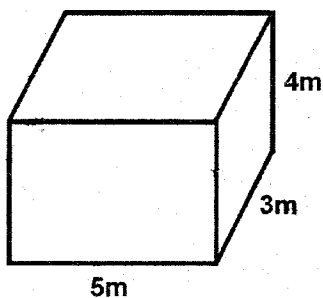
**READ THESE INSTRUCTIONS CAREFULLY**

1. You have been given this question paper and a separate answer sheet. The question paper contains 50 questions.
2. Do any necessary rough work in this paper.
3. When you have chosen your answer, mark it on the ANSWER SHEET, not in this question paper.

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1. Write five hundred and eight thousand, two hundred and fifty six in symbol<br/>A. 58256                      B. 508256<br/>C. 580256                      D. 5008256</li> <li>2. When I squared a number, I got 196. What number did I square?<br/>A. 98                              B. 49<br/>C. 14                              D. 28</li> <li>3. Round off 687462 to the nearest hundred<br/>A. 687500                      B. 687000<br/>C. 687400                      D. 687460</li> <li>4. The population of a town is 2600431. The number of men is 485 963 and that of women is 974089. How many children are there in the town?<br/>A. 1460052                      B. 1260421<br/>C. 4060483                      D. 1140379</li> <li>5. What is the place value of digit 7 in 3745862?<br/>A. Ten thousands              B. Hundred thousands<br/>C. Millions                      D. Thousands</li> <li>6. What is the GCD of 24, 36 and 18?<br/>A. 72      B. 9      C. 144      D. 6</li> <li>7. What is the reciprocal of <math>6\frac{3}{4}</math>?<br/>A. <math>\frac{4}{27}</math>                              B. <math>\frac{27}{4}</math><br/>C. <math>\frac{4}{13}</math>                              D. <math>\frac{13}{4}</math></li> <li>8. Which of the following numbers is divisible by 3?<br/>A. 46372                          B. 32631<br/>C. 63965                          D. 9242</li> </ol> | <ol style="list-style-type: none"> <li>9. Kennedy and Bonface wanted to buy a text book. Kennedy contributed <math>\frac{3}{8}</math> of the cost while Bonface contributed <math>\frac{1}{6}</math> of the cost. What fraction of the cost did Kennedy contribute more than Bonface?<br/><br/>A. <math>\frac{13}{24}</math>      B. <math>\frac{4}{14}</math>      C. <math>\frac{2}{8}</math>      D. <math>\frac{5}{24}</math></li> <li>10. Round off 24.765 to the nearest two decimal places?<br/>A. 24.76                              B. 24.80<br/>C. 24.77                              D. 25.00</li> <li>11. Ochunye prepared <math>6\frac{1}{4}</math> litres of juice for her birthday party. If everybody took <math>\frac{1}{4}</math> of a litre of the juice, how many people were at the party?<br/><br/>A. 25      B. 11      C. <math>1\frac{9}{16}</math>      D. <math>6\frac{1}{2}</math></li> <li>12. The figure below shows a circular flower garden.<br/><br/><br/><br/>What is the circumference of the garden?<br/>A. 28m                              B. 88m<br/>C. 44m                              D. 22m</li> <li>13. A rectangular piece of paper measures 30cm by 24cm. Calculate the area of the paper.<br/>A. 720cm<sup>2</sup>                          B. 108cm<sup>2</sup><br/>C. 723cm<sup>2</sup>                          D. 54cm<sup>2</sup></li> </ol> |
|---|---|

14. Work out:  $8.4 \times 3.4$   
 A. 2856                      B. 285.6  
 C. 28.56                      D. 11.8
15. A Pick-up was loaded with 50 cartons of milk. Each carton contained 81 packets. If each packet of milk had a capacity of 2 decilitres, how many litres of milk did the Pick-up carry?  
 A. 8.10                      B. 8100  
 C. 810                      D. 81
16. Linet travelled 168km in 4 hours. At what speed did she travel?  
 A. 172km/h                      B. 164km/h  
 C. 672km/h                      D. 42km/h

17. The figure below shows a rectangular tank measuring 5m by 3m by 4m. What is its volume?



- A.  $60m^3$                       B.  $19m^3$   
 C.  $63m^3$                       D.  $70m^3$
18. The perimeter of a rectangle is 128m. If the length of the rectangle is 38m, find the width  
 A. 90cm                      B. 26cm  
 C. 52cm                      D. 166cm
19. A bus left Ugunja at 8:45 am and reached Nairobi at 4:30pm. How long did the journey take?  
 A. 13hrs 15mins                      B. 4hrs 15mins  
 C. 8hrs 15mins                      D. 7hrs 45mins
20. Forty parcels of books were loaded into a lorry. If the mass of each parcel was 36kg, what was the total mass of the parcel in tones?  
 A. 1440    B. 14.4    C. 1.44    D. 144

21. Solve for x in the equation:  $3x - 9 = 18$   
 A. 3                      B. 9                      C. 6                      D. 8

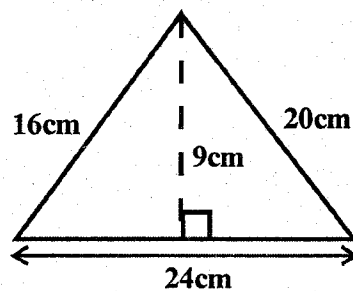
22. Wasonga went to a shop and bought the following items  
 2kg of sugar @ sh. 140  
 1kg of salt @ sh. 60  
 2 packets of flour for sh. 300  
 $\frac{1}{2}$  kg of margarine @ sh. 360  
 How much money did he pay for the items?  
 A. Sh. 820                      B. Sh. 860  
 C. Sh. 1000                      D. Sh. 1020
23. Using a ruler and a protractor, draw triangle XYZ such that  $XY = 7cm$ , angle  $XYZ = 60^\circ$  and angle  $YXZ = 45$ . What is the measure of length  
 A. 5.2cm                      B. 6.4cm  
 C. 7cm                      D. 7.4cm

24. Which of the following is the next number in the pattern? 12, 15, 21, 30, 42, \_\_\_\_  
 A. 54    B. 60    C. 57    D. 58

25. Simplify the algebraic expression below  
 $4(3x + 2y) + 3(3x - 2y)$   
 A.  $21x + 14y$                       B.  $21x - 14y$   
 C.  $21x + 2y$                       D.  $21x - 2y$

26. If 1cm represents 60m. What length in centimetres would represent 480m?  
 A. 540cm    B. 8cm    C. 420cm    D. 80cm

27. Calculate the area of the triangle below

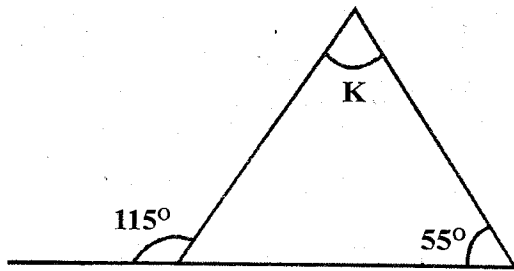


- A.  $72cm^2$     B.  $108cm^2$     C.  $90cm^2$     D.  $69cm^2$

28. Work out:
- |       |     |
|-------|-----|
| Sh.   | Ct. |
| 578   | 60  |
| + 279 | 80  |
|       |     |

- A. Sh. 858 and 40ct                      B. Sh. 857 and 140ct  
 C. Sh. 857 and 40ct                      D. Sh. 859 and 40ct

29. Find the size of angle marked k in the figure below



- A.  $60^\circ$     B.  $65^\circ$     C.  $125^\circ$     D.  $10^\circ$

30. The table below shows the number of pupils who were present in a class of 40 pupils in a week. How many pupils were absent that week?

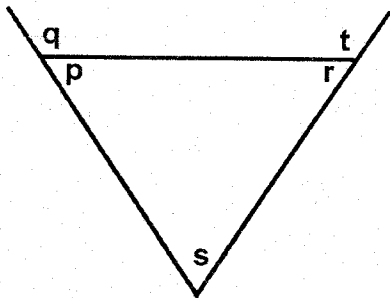
Day	Mon	Tue	Wed	Thu	Fri
No. of pupils present	31	34	36	31	33

- A. 165    B. 45    C. 35    D. 155

31. What is the place value of digit 5 in 28.547?

- A. Thousandths    B. Hundreds  
C. Tenths    D. Hundredths

32. Which of the following statements is true according to the diagram below?



- A.  $r + q = 180^\circ$     B.  $p + s = q$   
C.  $q - r = p$     D.  $t - p = s$

33. One bell rings after 36 minutes and another after 48 minutes. How long does it take for the bells to ring together?

- A. 144    B. 12    C. 72    D. 288

34. What is the square root of  $12\frac{1}{4}$ ?

- A.  $6\frac{1}{2}$     B.  $4\frac{1}{2}$     C.  $3\frac{1}{2}$     D.  $5\frac{1}{2}$

35. Work out:  $79.3 + 33.25 + 50.125$

- A. 54.243    B. 162.675  
C. 54.233    D. 1626.75

36. Work out:  $56 \overline{) 116816}$

- A. 2086    B. 286    C. 2186    D. 20086

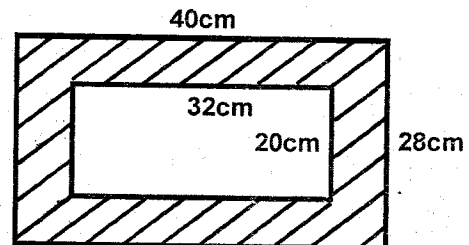
37. A man cycled 75% of the journey and then walked the rest of the way. How long was the journey if he walked 10km?

- A. 30km    B.  $13\frac{1}{3}$  km  
C. 40km    D.  $7\frac{1}{2}$

38. Ojanja bought a digital TV at sh. 16000 and later sold it at sh. 20 000. What was his percentage profit?

- A. 20%    B. 75%    C. 80%    D. 25%

39. Find the shaded area in the figure below



- A.  $640\text{cm}^2$     B.  $480\text{cm}^2$   
C.  $1760\text{cm}^2$     D.  $1120\text{cm}^2$

40. Amina bought 72 mangoes. Later she found that  $\frac{1}{4}$  of them were bad. How many mangoes were good?

- A. 18    B. 90    C. 288    D. 54

41. The table below shows charges for sending letters

Mass steps		Charges	
		Shs.	Cts.
Letters	Up to 20g	40	00
	Over 20g upto 50g	80	00
	Over 50g upto 100g	150	00
	Over 100g upto 250g	370	00
	Over 250g upto 350g	520	00

Ogu sent two letters each weighing 40g and one letter weighing 120g. How much money did he pay?

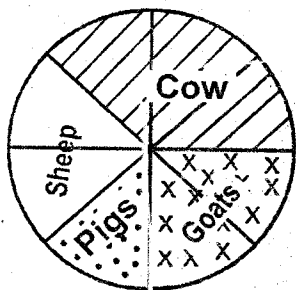
- A. Sh. 450    B. Sh. 310  
C. Sh. 530    D. Sh. 520

42. The ages of 6 pupils are 14 years, 17 years, 13 years, 12 years, 13 years and 15 years. What is the mean age of the six pupils?
- A. 14 years                      B. 13 years  
C. 15 years                      D. 12 years

43. A square garden has a length of 25m. Find the area of the garden in ares
- A. 0.0625    B. 6.25    C. 62500    D. 62.5

44. Convert 108km/hr into m/s
- A. 25m/s    B. 3m/s    C. 388.8m/s    D. 30m/s

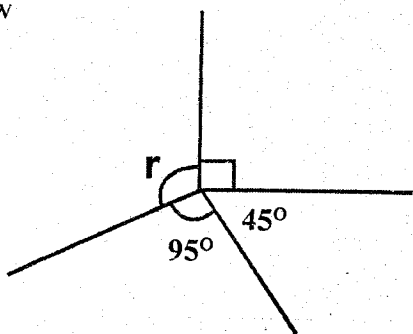
45. The circle graph below shows the number of animals in Okinda's farm. If he has 72 animals, how many cows are there in the farm?



- A. 18    B. 9    C. 27    D. 36

46. Work out:  $36 \div 0.12$
- A. 30    B. 3    C. 0.03    D. 300

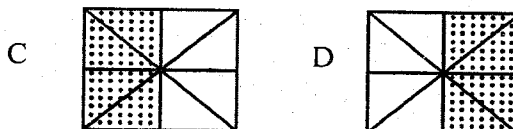
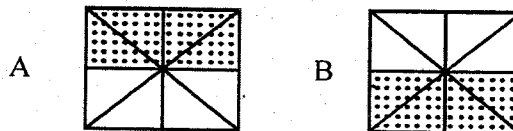
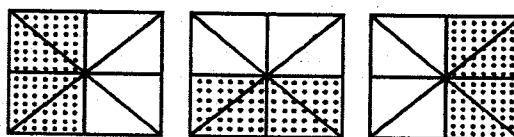
47. Find the size of the angle marked  $r$  in the figure below



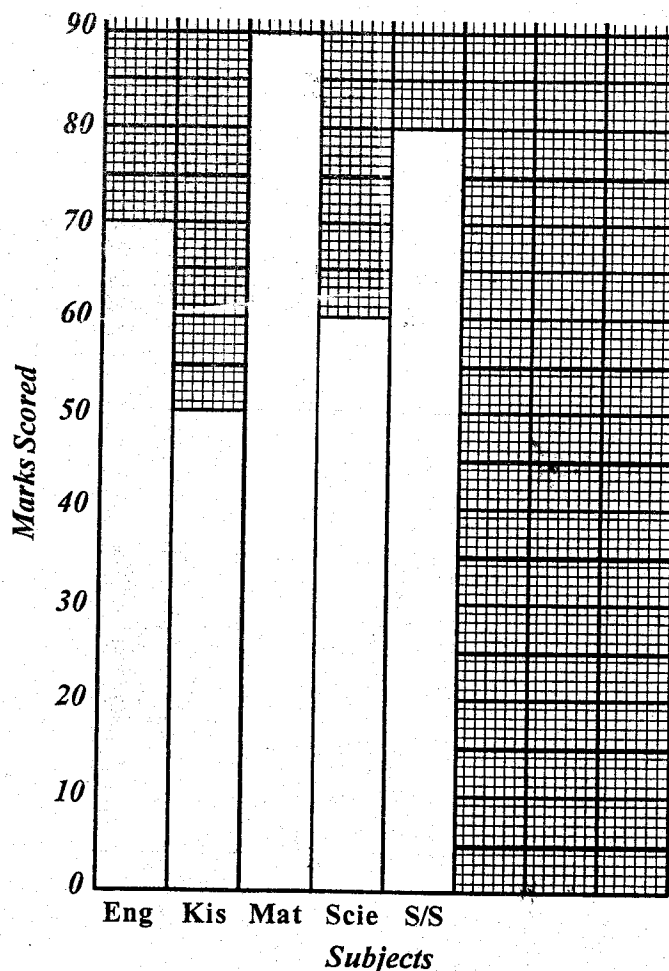
- A.  $90^\circ$     B.  $130^\circ$     C.  $140^\circ$     D.  $40^\circ$

48. Work out:  $12t$      $623kg$      $150g \div 5$
- A. 2t    524kg    63g  
B. 2t    124kg    630g  
C. 2t    524kg    30g  
D. 2t    524kg    630g

49. What is the next shape in the pattern?



50. The bar graph shows the marks scored by a pupil in a test.



How many marks did he score in the five subjects?

- A. 340                      B. 320  
C. 350                      D. 360