

2022

Hillrange JS1 Entrance Exam Subject: Mathematics Time: 60 minutes

Instruction: Attempt all the questions; circle the correct options.

1. What fraction of 2 minutes is 6 seconds?

- A. $\frac{1}{6}$
B. $\frac{1}{10}$
C. $\frac{1}{20}$
D. $\frac{1}{60}$
E. $\frac{2}{5}$

2. Subtract:

hr	min	sec
4	15	0
1	45	15

- A. 1 hr. 29 min. 45 sec
B. 2 hr. 29 min. 45 sec
C. 2 hr. 30 min. 15 sec
D. 3 hr. 30 min. 15 sec
E. 3 hr. 29 min. 45 sec
3. A certain number is multiplied by 5 and then 13 is added. The result is 48. What is the number?
A. 65
B. 43
C. 35
D. 8
E. 7
4. In a class of 32 boys, 16 passed the examination and 4 were absent. The rest failed. What fraction of the whole class failed?
A. $\frac{1}{2}$
B. $\frac{3}{8}$
C. $\frac{3}{7}$
D. $\frac{4}{7}$

- E. $\frac{5}{8}$
5. Multiply 28.3 by 2.7
A. 67410
B. 7641.0
C. 764.10
D. 76.410
E. 7.6410

Study the examples below carefully.

(5 : 10), (6 : 18), (7 : 28)

(9 : 81), (10 : 100), (12 : 144)

(49 : 7), (81 : 9), (169 : 13)

Use the information above to answer questions 6 – 10.

6. (13 : 26), (17 : 34), (? : 36)
A. 9
B. 11
C. 12
D. 16
E. 18
7. (9 : 63), (10 : 80), (? : 99)
A. 10
B. 11
C. 12
D. 13
E. 14
8. (144 : 12), (121 : ?), (100 : 10)
A. 21
B. 17
C. 12
D. 11
E. 9

9. $(5 : 25), (? : 36), (7 : 49)$
- 11
 - 7
 - 6
 - 5
 - 3
10. $(5 : 19), (6 : 23), (7 : ?)$
- 27
 - 28
 - 45
 - 46
 - 49
11. The edge of an equilateral triangle is 11.06cm. What is the perimeter of the triangle?
- 43.18cm
 - 33.18cm
 - 22.19cm
 - 16.59cm
 - 3.318cm
12. A number when multiplied by 290 gives 41,470. What was the number?
- 103
 - 134
 - 143
 - 144
 - 243
13. John buys 20 bunches of bananas for ₦15,000.00 and sell them all for ₦18,000.00. What is his percentage gain?
- 10%
 - 15%
 - 20%
 - 25%
 - 30%
14. Simplify $7\frac{1}{2} - (3 + 2\frac{1}{3})$
- $6\frac{5}{6}$
 - $6\frac{1}{3}$
 - $2\frac{1}{3}$
 - $2\frac{1}{6}$
 - $1\frac{5}{6}$
15. When Uzo was 15 years old, his sister Chinwe was 18. If Uzo was born in 2003, in what year was Chinwe born?
- 2009
 - 2006
 - 2002
 - 2001
 - 2000
16. At what speed does a boy run if he covers 12km in 3hrs?
- 36km/hr
 - 15km/hr
 - 9km/hr
 - 4km/hr
 - 3km/hr
17. Jones, Edu and Ekpo shared a number oranges. Jones had $\frac{1}{5}$ of them and Edu $\frac{1}{3}$, what fraction of them did Ekpo get?
- $\frac{3}{15}$
 - $\frac{4}{15}$
 - $\frac{7}{15}$
 - $\frac{1}{3}$
 - 15
18. Subtract 1.137 from 25% of 75.52
- 74.383
 - 28.483
 - 17.753

- D. 17.743
E. 16.578
19. If $2x - 7 = 21$, what is the value of x ?
A. 7
B. 14
C. 17
D. 28
E. 35
20. If 125 men can do a piece of work in 120 days, how many men would be sufficient to do the same work in 100 days?
A. 180 men
B. 150 men
C. 115 men
D. 108 men
E. 96 men
21. Find by factor method, the square root of 576.
A. 14
B. 16
C. 18
D. 24
E. 26
22. If $\frac{3}{5}$ of all the pupils in a school are 180, what is the total number of pupils in the school?
A. 600
B. 300
C. 280
D. 240
E. 120
23. In a class of 105 pupils, the girls are 25 more than the boys. How many boys are there in the school?
A. 40
B. 45
C. 50

- D. 55
E. 65
24. Grace, Irene and Patience shared ₦396 in the ratio 5 : 4 : 3 respectively. How much did Grace receive?
A. ₦66
B. ₦99
C. ₦132
D. ₦165
E. ₦198
25. A man loses 20 percent by selling an article for ₦11. What was the cost price of the article?
A. 10.50
B. 13.20
C. 13.75
D. 15.25
E. 17.45

Given that: $T(0) = 0$, $T(1) = 2$, $T(3) = 6$.

26. What is $\frac{T(1)}{4}$?
A. 4
B. 3
C. 2
D. 1
E. $\frac{1}{2}$
27. What is $T(5)$?
A. 25
B. 20
C. 15
D. 10
E. 5
28. What is $\frac{T(75)}{T(10)}$?
A. 750
B. 65
C. 25.5

- D. 15
- E. 7.5

Find the missing number in questions 29 and 30.

29. ---, 38, 29, 20

- A. 57
- B. 49
- C. 48
- D. 47
- E. 34

30. 72, ---, 18, 9

- A. 56
- B. 48
- C. 36
- D. 32
- E. 26

31. How many days are there in the first four months of a leap year?

- A. 98 days
- B. 110 days
- C. 118 days
- D. 120 days
- E. 121 days

32. Evaluate $\frac{3.2 \times 0.4}{0.016}$

- A. 0.008
- B. 0.08
- C. 0.8
- D. 8.0
- E. 80

33. What is the smallest number that can be divided exactly by 7, 9 and 15.

- A. 105
- B. 300
- C. 305
- D. 315
- E. 345

34. How many seconds are there between 10:10am and 10:25am

- A. 15 seconds
- B. 30 seconds
- C. 300 seconds
- D. 600 seconds
- E. 900 seconds

35. What is the value of 2 in the number 31.528?

- A. two units
- B. two tens
- C. two tenths
- D. two hundredths
- E. two thousandths

36. Express 364 in Roman figures

- A. CCCXLIV
- B. CCCXLVI
- C. CCCLXIV
- D. CCCLXVI
- E. CCCLXIX

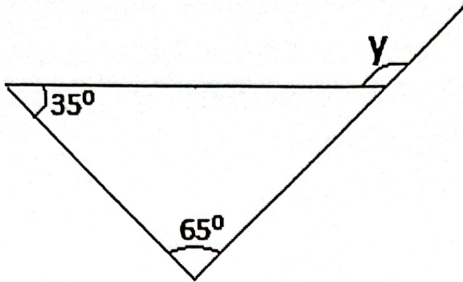
37. What is the square root of $6\frac{1}{4}$?

- A. 25
- B. $6\frac{1}{2}$
- C. $4\frac{1}{2}$
- D. $3\frac{1}{2}$
- E. $2\frac{1}{2}$

38. Simplify: $\frac{x^2 - y^2}{x - y}$ if $x = 9$ and $y = 5$.

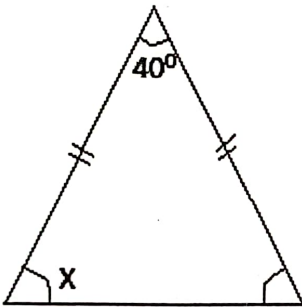
- A. 81
- B. 56
- C. 25
- D. 14
- E. 4

39. What is the value of y in the diagram below?



- A. 35°
- B. 65°
- C. 80°
- D. 100°
- E. 115°

40. What is the value of x in the diagram below



- A. 40°
- B. 50°
- C. 60°
- D. 70°
- E. 80°

41. What is the value of x if $\frac{x}{6} = \frac{7}{3}$?

- A. 42
- B. 21
- C. 18
- D. 14
- E. 7

42. Arrange the following in ascending order 0, -3, -2, 4, 6.

- A. 6, 4, -3, -2, 0
- B. 0, -2, -3, 4, 6
- C. -3, -2, 0, 4, 6
- D. 6, 4, 0, -2, -3
- E. 0, -3, -2, 4, 6

43. Find the circumference of a circle whose diameter is 14cm (take $\pi = \frac{22}{7}$)

- A. 22cm
- B. 44cm
- C. 88cm
- D. 154cm
- E. 164cm

44. What is the name given to the shape of Bournvita tin?

- A. A sphere
- B. A pyramid
- C. A cone
- D. A cuboid
- E. A cylinder

45. Find the missing number

	4	3	9
+	7	*	4
	1	2	2
	2	2	3

- A. 9
- B. 8
- C. 7
- D. 6
- E. 5

46. Express the L.C.M of 50, 18 and 32 in prime factors.

- A. $2^5 \times 3^2 \times 5^2$
- B. $2^4 \times 3^2 \times 5$
- C. $2^5 \times 3 \times 5^2$
- D. $2^3 \times 3^2 \times 5^2$
- E. $2^5 \times 3 \times 5$

47. Of 140 mangoes in a basket, 42 of them were bad. What percentage of the mangoes was good?

- A. 80%
- B. 70%
- C. 68%
- D. 65%
- E. 60%

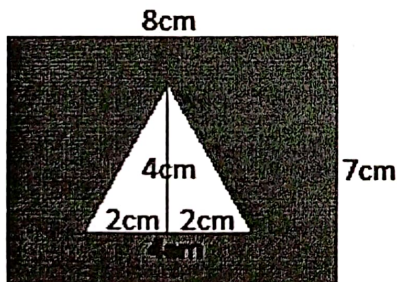
48. There are two scores, three dozens and five books in a shelf. How many books are there altogether?

- A. 60
- B. 69
- C. 81
- D. 89
- E. 99

49. What is the volume of a box 18cm long, 15cm wide and 10cm high?

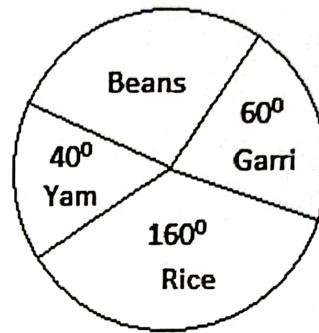
- A. 3000cm^3
- B. 2800cm^3
- C. 2700cm^3
- D. 2500cm^3
- E. 2100cm^3

50. Find the area of the shaded portion in the diagram below.



- A. 56cm^2
- B. 48cm^2
- C. 46cm^2
- D. 44cm^2
- E. 42cm^2

The pie chart below shows the type of food eaten by 480 students in a boarding school. Study it carefully and answer questions 51 – 53.



51. What type of food is eaten by majority of the students?

- A. Beans
- B. Yam
- C. Rice
- D. Garri
- E. Beans and Yam

52. The number of students who ate beans is represented by

- A. 180^0
- B. 120^0
- C. 100^0
- D. 80^0
- E. 60^0

53. How many students ate Garri?

- A. 160 students
- B. 120 students
- C. 100 students
- D. 80 students
- E. 40 students

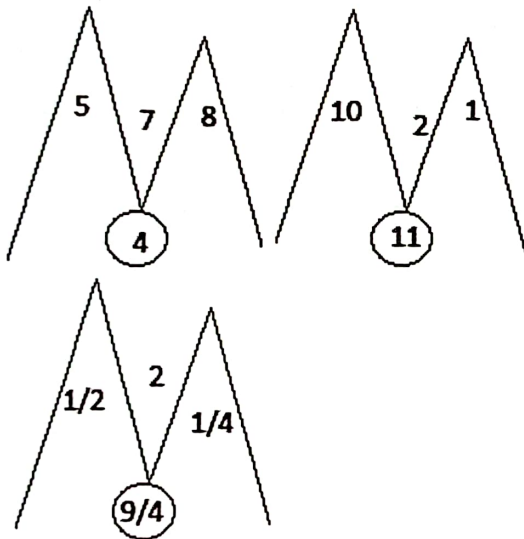
54. What is the median of the set of numbers: 4, 1, 2, 0, 5, 3, 4?

- A. 0
- B. 1
- C. 2
- D. 3
- E. 4

55. The average of the following numbers: 12, 30, m, 40 and 50 is 36. What is the value of m?

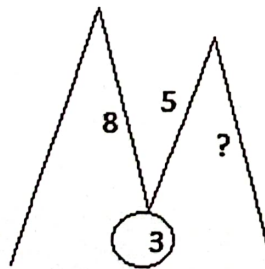
- A. 48
- B. 42
- C. 38
- D. 33
- E. 28

Sample



Use the samples above to answer numbers 56 and 57

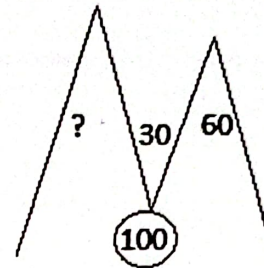
56.



- A. 6

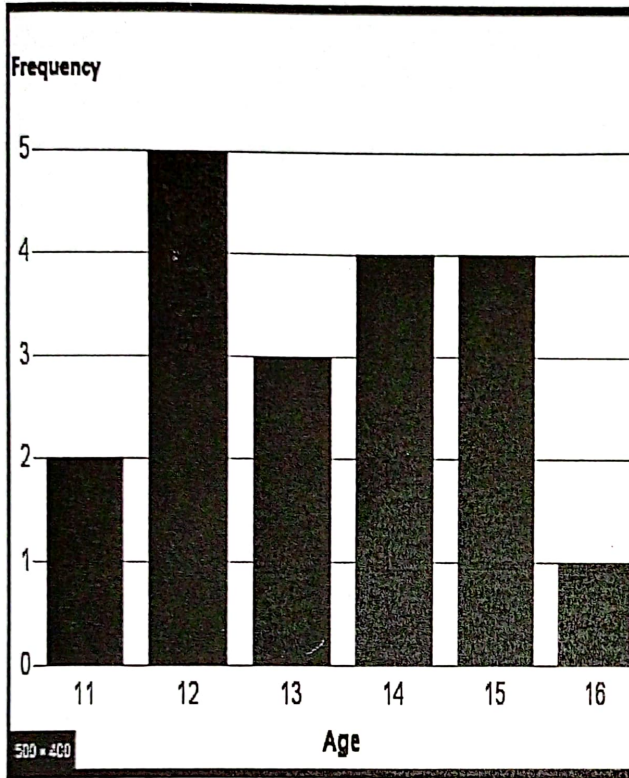
- B. 8
- C. 10
- D. 12
- E. 14

57.



- A. 135
- B. 130
- C. 125
- D. 120
- E. 115

The bar chart below shows the ages of students admitted into JS 1 in a village secondary school. Use the information to answer questions 58 – 60.



58. What was the modal age?

- A. 4
- B. 5
- C. 12
- D. 14
- E. 15

59. What ages had equal number of students?

- A. 11 and 13
- B. 13 and 14
- C. 14 and 15
- D. 11 and 16
- E. 12 and 16

60. How many students were admitted altogether?

- A. 12 students
- B. 14 students
- C. 15 students
- D. 19 students
- E. 22 students

Good luck!