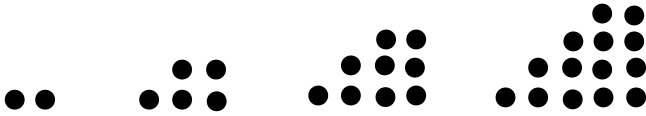


SOAL TRY OUT RSBI TH. 2011-212

1. The result of $16 - 12 : 2 + (-4)$ is . . .
A. -4
B. -2
C. 4
D. 6
2. A multiple choice test has 50 questions. A correct answer will get a score of 4, an incorrect answer will get a score of -1, and an unanswered question will get a score of 0. Ahmad who answered 26 questions correctly and left 10 questions unanswered. What is his total score ?
A. 104
B. 94
C. 90
D. 80
3. The result of $1\frac{2}{3} - 2\frac{1}{2} + 4\frac{1}{4}$ is . . .
A. $3\frac{1}{2}$
B. $3\frac{5}{12}$
C. $-3\frac{1}{2}$
D. $-3\frac{5}{12}$
4. Fifteen litres of petrol can be used for 120 km. If you have 12 litres of petrol, how many kilometres can you reach?
A. 48 km
B. 64 km
C. 96 km
D. 108 km
5. A project can finished by 25 workers in 32 days. If it must be finished in 20 days, how many workers are added so that the project finished on time?
A. 10
B. 15
C. 25
D. 40
6. A seller sells of TV at price Rp 1,800,000.00. He gets profit of 20%. The buying price of TV is . . .
A. Rp 1,300,000.00
B. Rp 1,450,000.00
C. Rp 1,500,000.00
D. Rp 1,600,000.00
7. Fian saves Rp 6,000,000.00 in a bank. The bank gives an interest of 18% per year. The amount of Fian's saving after 16 months is . . .
A. Rp 1,440,000.00
B. Rp 1,540,000.00
C. Rp 7,540,000.00
D. Rp 7,440,000.00

8. Look at the patterned figures below. The number of dots in the 9th figure of the sequence is ...

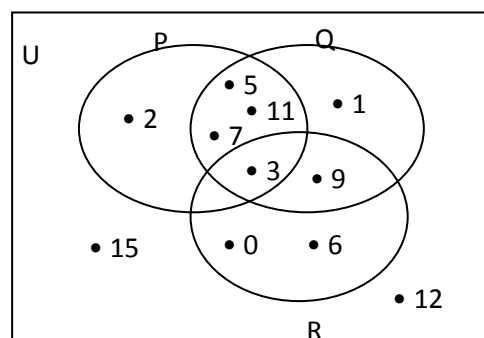


- A. 54
B. 44
C. 32
D. 27
9. $(3x + \frac{1}{2})(\frac{1}{3}x - 2) = \dots$
- A. $x^2 - \frac{5}{6}x - 1$
B. $x^2 - \frac{1}{2}x - 1$
C. $x^2 + \frac{5}{6}x - 1$
D. $x^2 + \frac{1}{2}x - 1$
10. The result of the subtraction of $3p^2 + 4p - 7$ from $5p^2 - 7p + 2$ is ...
- A. $2p^2 - 11p + 9$
B. $2p^2 + 11p + 9$
C. $-2p^2 + 11p - 9$
D. $-2p^2 + 11p + 9$
11. The simple form of $\frac{2a^2 - 5a - 12}{4a^2 - 9}$ is ...
- A. $\frac{a+4}{2a-3}$
B. $\frac{a-4}{2a-3}$
C. $\frac{a-4}{2a+3}$
D. $\frac{a+4}{2a+3}$
12. The value of x satisfying $\frac{1}{2}(2x - 6) = \frac{2}{3}(x - 4)$ is ...
- A. -17
B. -1
C. 1
D. 17

13. Look at the Venn diagram on the right.

$$(P \cup Q) \cap R = \dots$$

- A. {3}
B. {3, 9}



- C. {3, 5, 7, 11}
- D. {3, 5, 7, 9, 11}

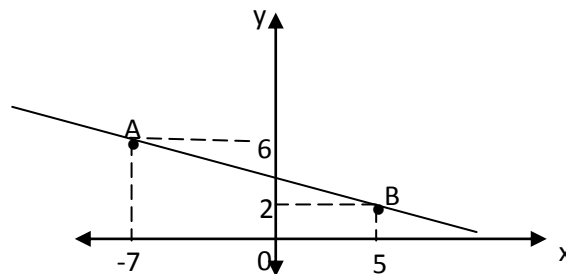
14. A group consists of 26 students, 11 students like volley ball, 12 students like foot ball, and 8 do not like both. The number of students who like foot ball only is . . .
- A. 5 students
 - B. 6 students
 - C. 7 students
 - D. 11 students

15. The possible function among the relations below is . . .
- A. The relation from a set of body heights to a set of students
 - B. The relation from a set of body weights to a set of teachers
 - C. The relation from a set of teachers to a set of their daughter
 - D. The relation from a set of teachers to a set of shoe sizes

16. A function is defined as $x \rightarrow 4 - x^2$ with {1, 2, 3, 4} as its domain. The range of the function is . . .
- A. {3, 0, -5, -12}
 - B. {3, 2, 13, 0}
 - C. {3, -2, 13, 0}
 - D. {3, 0, 5, 12}

17. The slope of line AB below is . . .

- A. -3
- B. $-\frac{1}{3}$
- C. $\frac{1}{3}$
- D. 3

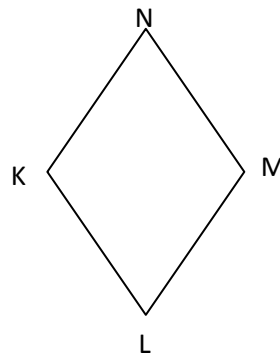


18. The equation of a straight line which passes trough the intersection point of two lines $3y - x = 7$ and $2x + 3y = 4$ and is perpendicular to line $2x + 6y - 4 = 0$ is
- A. $3x + y = 5$
 - B. $3x + y = -5$
 - C. $y - 3x = 1$
 - D. $y - 3x = 5$

19. The solution to the system of equations $\begin{cases} 2x + 3y = 2 \\ 4x - y = 18 \end{cases}$ is a and b . The value of $5a - 2b$ is .
- A. 24
 - B. 16
 - C. -2
 - D. -18

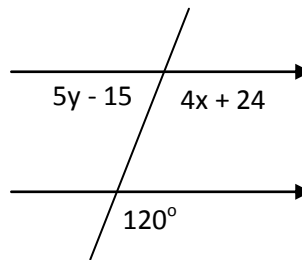
26. In the following figure, KLMN is a rhombus with $\angle KLM : \angle LMN = 7 : 3$. The measure of $\angle KLM + \angle KNM = \dots$

- A. 252°
 B. 126°
 C. 108°
 D. 54°



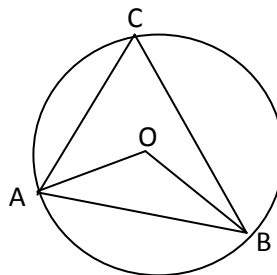
27. The value of $x + y$ in the following figure is

- A. 24°
 B. 39°
 C. 60°
 D. 120°



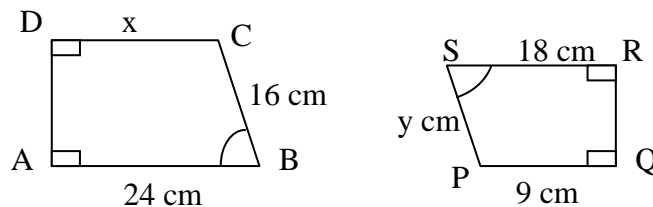
28. In the figure, $\angle BAO = 30^\circ$ and $\angle CBO = 20^\circ$, then the measure of $\angle BAC$ is ...

- A. 50°
 B. 70°
 C. 110°
 D. 120°



29. In figure shows two similar trapezoids. The value of $x + y$ is

- A. 12 cm
 B. 16 cm
 C. 28 cm
 D. 30 cm

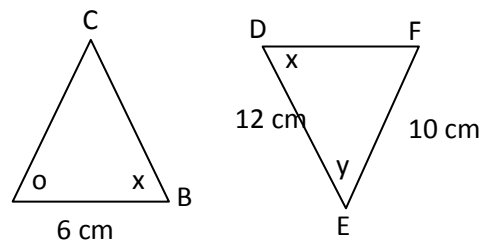


30. An electric pole and a tree cast shadows of lengths 3 m and 5 m. If the height of the tree is 7.5 m, then the height of the electric pole is

- A. 2.0 m
 B. 4.5 m
 C. 8.0 m
 D. 9.5 m

31. At the picture, $\triangle ABC$ and $\triangle DEF$ are two congruent triangles. The length of BC is

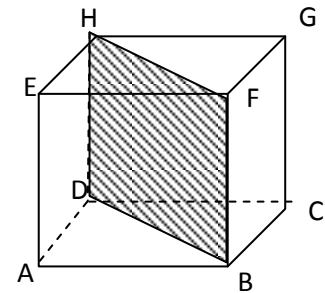
- A. 12 cm
- B. 10 cm
- C. 6 cm
- D. 5 cm



32. Look at the figure on the right.

ABCD. EFGH is a cube. The type of the shaded area is a ...

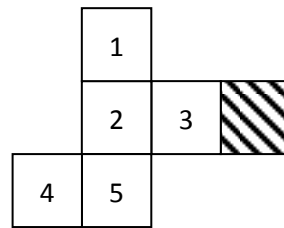
- A. Square
- B. Rhombus
- C. Parallelogram
- D. Rectangle



33. In the net of a cube on the right, the shaded area is the base of the cube.

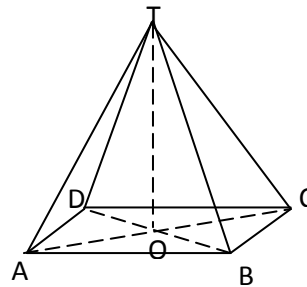
The top of the cube is ...

- A. 5
- B. 4
- C. 3
- D. 2



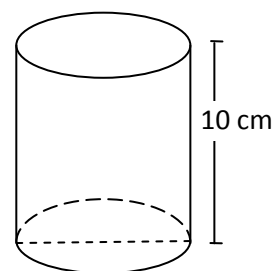
34. Given that T. ABCD is a square pyramid with a surface area of 360 cm^2 . If $AB = 10 \text{ cm}$, then the volume of T. ABCD is ...

- A. 120 cm^2
- B. 240 cm^2
- C. 400 cm^2
- D. 480 cm^2



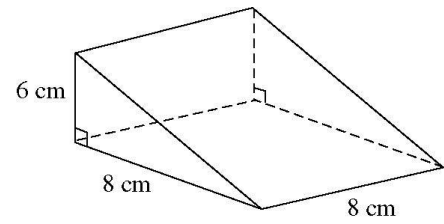
35. The lateral area of the cylinder on the right is 660 cm^2 . If $\pi = \frac{22}{7}$, the radius of the cylinder is

- A. 10.5 cm
- B. 17.5 cm
- C. 21.0 cm
- D. 35.0 cm



36. The surface area of the prism on the right figure is

- A. 480 cm^3
- B. 304 cm^3
- C. 288 cm^3
- D. 240 cm^3



37. The circumference of the base of a cone is 44 cm and the slant height is 25 cm. Using $\pi = \frac{22}{7}$, the surface area of a cone is

- A. $1,100 \text{ cm}^2$
- B. 704 cm^2
- C. 682 cm^2
- D. 550 cm^2

38. Look at the data below.

| | | | | | | | |
|-----------|---|---|---|---|---|---|----|
| Scores | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Frequency | 5 | 9 | 3 | 5 | 4 | 7 | 12 |

The median of the above data is ...

- A. 6.5
- B. 6.0
- C. 5.0
- D. 5.5

39. Class A has 20 students. Class B has 15 students. If the average math score of Class A and Class B is 60 and 67 respectively, the average math score of both classes are combined is

- A. 63
- B. 64
- C. 65
- D. 67

40. in the table below shows the numbers of a mathematics test score.

| | | | | | | | |
|-----------------|---|---|---|---|---|---|----|
| Scores | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Number of score | 5 | 9 | 3 | 5 | 4 | 7 | 12 |

The correct statement of the above data is

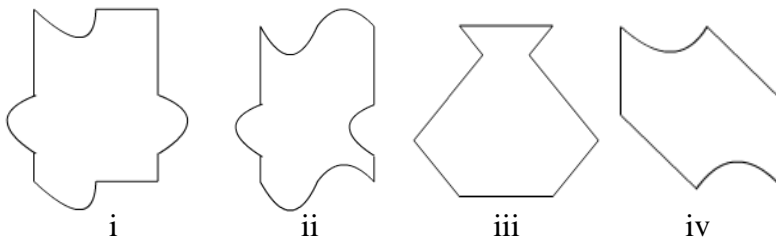
- A. The score of highest frequency is 12
- B. The score of lowest frequency is 10
- C. The frequency of the score are below 6 is 14
- D. The frequency of the score are above 8 is 23

41. The solution set of $\frac{1}{2}(x-1) < 2 + \frac{3}{4}x$ is ... (x is an integer)

- A. { ..., -9, -8, -7, -6, -5 } C. {-9, -8, -7, -6, -5, ... }
- B. { ..., -10, -9, -8, -7, -6 } D. {-10, -9, -8, -7, -6, ... }
42. Five times of Alfi's money added by Rp 1000,00 is not more than Rp 4000,00. How many Alfi's money?
- A. Alfi's money is not more than Rp 300,00
- B. Alfi's money is not more than Rp 400,00
- C. Alfi's money is not more than Rp 500,00
- D. Alfi's money is not more than Rp 600,00
43. The sample space in the experiment of throwing a coin two times is . . .
- A. {(T, H)}
- B. {(T,H),(, H,T)}
- C. {(H,H), (T,T), (T,H) }
- D. {(T,T), (T,H), (H,H), (H,T) }
44. Two dice are rolled at once. The probability that the sum of the appearing numbers is a odd number is
- A. $\frac{1}{3}$ * C. $\frac{1}{9}$
- B. $\frac{1}{6}$ D. $\frac{1}{12}$
45. What is the simplest form of $\left(\frac{-3x^2y^3z}{9x^4z^2}\right)^3$
- A. $\frac{y^9}{27x z^2}$ C. $\frac{-y^9}{27xz^2}$
- B. $\frac{y^9}{27x^2z}$ D. $\frac{-y^9}{27x^2z}$ *
46. $p^{\frac{1}{2}} \times (\sqrt{p})^{\frac{2}{3}} = \dots$
- A. $\sqrt[6]{p^{11}}$ * C. p^6
- B. $\sqrt[11]{p^6}$ D. p^{11}

47. In a geometric sequence, the first term is 5 and the ninth term is 1280. The fifth term is..
- A. 40
 - B. 80
 - C. 120
 - D. 240
48. Given the regular polygon having 3, 4, 5, 6, and 8 sides. A design of regular tessellation can be created from these polygon having . . .
- A. 3, 4, and 5 sides
 - B. 4, 6, and 8 sides
 - C. 3, 4 and 6 sides
 - D. 4, 5, and 6 sides

49. Look at the figures below.



- Which figures can be used to create an irregular tessellation ?
- A. (i) and (ii)
 - B. (i) and (iii)
 - C. (ii) and (iii)
 - D. (ii) and (iv)

50. Look at the diagram below.

| Steam | Leaf |
|-------|-------------|
| 12 | 6 7 |
| 13 | 1 2 3 9 |
| 14 | 8 9 |
| 15 | 2 3 7 9 |
| 16 | 5 3 2 8 7 8 |

11/4 means 114

This stem-and-leaf diagram displays the set of players' heights in centimetres in a school volley ball team. The mode of the data is . . .

- A. 149
- B. 152
- C. 153
- D. 168