

## Amazon (Aptitude, Reasoning & Technical) Set - II



1. In an examination the average marks of Rohini is 74. If she got 16 more marks in Hindi and 20 more marks in English then her average would have been 78. Find the total number of subjects he studied?

- A. 7
- B. 8
- C. 9
- D. 10

**Answer – C. 9**

**Explanation:**

Let total subjects are t.

Then,  $(74t + 20 + 16)/t = 78$

So,  $t = 9$

2. Basheer travels first one-third of the total distance at the speed of 10 kmph and the next one-third distance at the speed of 20 kmph and the last one – third distance at the speed of 60 kmph. What is the average speed of Basheer?

- A. 12 kmph
- B. 14 kmph
- C. 16 kmph
- D. 18 kmph

**Answer – D. 18 kmph**

**Explanation:**

$= 3 * 10 * 20 * 60 / (200 + 1200 + 600)$

$= 18 \text{ kmph}$

3. An amount of money is to be divided between X, Y and Z in the ratio of 3: 7: 12. If the difference between the shares of X and Y is Rs.M, and the difference between Y and Z's share is Rs.3000. Find the total amount of money?

- A. 11000
- B. 12400
- C. 13200
- D. 14300

**Answer – C. 13200**

**Explanation:**

$12a - 7a = 3000$

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$$\begin{aligned}5a &= 3000 \\a &= 600 \\7a - 4a &= m \\3a &= m \\m &= 1800 \\22 * 600 &= 13200\end{aligned}$$

4. The salaries of P,Q and R are in the ratio 5: 3: 2.If the increments of 20% ,10% and 20% are allowed in their salaries, then what will be the new ratio of their salaries ?

- A. 20: 11: 8
- B. 22: 11: 9
- C. 22: 10: 8
- D. 20: 10: 9

**Answer – A. 20: 11: 8**

**Explanation:**

$$\begin{aligned}5: 3: 2 &= 500: 300: 200 \\500 \times (20/100) &= 100 \Rightarrow 500 + 100 = 600 \\300 \times (10/100) &= 30 \Rightarrow 300 + 30 = 330 \\200 \times (20/100) &= 40 \Rightarrow 200 + 40 = 240 \\600: 330: 240 &= 20: 11: 8\end{aligned}$$

Therefore, the new ratios of their salaries is 20: 11: 8

5. If 20% of x = 30% of y then x:y is

- A. 1:2
- B. 1:3
- C. 2:3
- D. 3:2

**Answer – D. 3:2**

**Explanation:**

$$\begin{aligned}(20/100)x &= (30/100)y \\x/y &= (30 \times 100)/(100 \times 20) = 3/2 = 3: 2\end{aligned}$$

6. The sum of the three number is 68.If the ratio of the first to second is 3:2 and that of the second to the third is 5:3 , then the second number is

- A. 21
- B. 22

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- C. 23
- D. 24

**Answer - B. 22**

**Explanation:**

$$P: Q = 3: 2$$

$$Q: R = 5: 3$$

$$= (5 \times [2/5]) : (3 \times [2/5])$$

$$= 2: (6/5)$$

$$P: Q: R = 3:2:(6/5) = 15:10:6$$

$$\text{Second number} = (10/31) \times 68 = 21.9 = 22 \text{ (Approximately)}$$

**7. A number is first decreased by 25%. The decreased number is then increased by 20%. The resulting number is less than the original number by 40. Then the original number is:**

- A. 100
- B. 200
- C. 300
- D. 400

**Answer – D. 400**

**Explanation:**

Let the number is a

$$a - (75/100) \times a \times (120/100) = 40$$

we will get a = 400

**8. Aruna goes to a supermarket and bought things worth rupees 60, out of which 40 paise went on sales tax. If the tax rate is 10 percent, then what was the cost of tax free items?**

- A. 56.60
- B. 57.60
- C. 54.60
- D. 55.60

**Answer – D. 55.60**

**Explanation:**

$$\text{tax} = 40/100 = (10/100) \times T, T = 4$$

$$\text{so cost of tax free items} = 60 - 4 - 0.40 = 55.60$$

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9. 30 litre of solution contains alcohol and water in the ratio 2:3. How much alcohol must be added to the solution to make a solution containing 60% of alcohol?

- A. 10
- B. 12
- C. 14
- D. 15

**Answer – D. 15**

**Explanation:**

Alcohol =  $30 \times \frac{2}{5} = 12$  and water = 18 litres

$$(12 + x)/(30 + x) = 60/100$$

Hence, we will get  $x = 15$

10. In a School, 40% of the students are female and thus the no of boys exceed the no of girls by 40. Find the total no of students.

- A. 100
- B. 150
- C. 180
- D. 200

**Answer - D. 200**

**Explanation:**

According to the given information

$$60x - 40x = 40$$

$$X = 40/20 = 2$$

$$100 \times 2 = 200$$

11. Choose the odd one out.

- A. TTOU
- B. USTO
- C. SSTO
- D. OOTU

**Answer - B. USTO**

**Explanation:**

In all other options, one letter occurs twice.

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12. Choose the odd one out.

- A. PXZD
- B. QSBR
- C. RAEG
- D. XYZA

**Answer - D. XYZA**

**Explanation:**

This is the only option containing four consecutive letters in the right alphabetical order.

13. Choose the word which is different from the rest.

- A. Moth
- B. Bee
- C. Lizard
- D. Aphid

**Answer - C. Lizard**

**Explanation:**

All except Lizard are insects, while lizard is a reptile.

14. Choose the word which is different from the rest.

- A. Wool
- B. Wood
- C. Plastic
- D. Paper

**Answer - C. Plastic**

**Explanation:**

All except Plastic are biodegradable materials.

15. Waves: Air:: Ripples: ?

- A. Light
- B. Wind
- C. Sound
- D. Water

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**Answer – D. Water**

**Explanation:**

waves travel in air while ripples travels in water

**16. Energy: Joule :: Force: ?**

- A. Newton
- B. Pascal
- C. Second
- D. Kilogram

**Answer – A. Newton**

**Explanation:**

Energy is measured in joule similarly force is measured in Newton

**17. In what type of dynamic array do you divide the array into two parts?**

- A. Hashed Array Tree
- B. Geometric Array
- C. Bounded-size dynamic array
- D. None of the Above

**Answer - C. Bounded-size dynamic array**

**Explanation:**

The first part stores the items of the dynamic array and the second part is reserved for new allocations.

**18. How will you implement dynamic arrays in Java?**

- A. Hash map
- B. List
- C. Set
- D. Map

**Answer - B. List**

**Explanation:**

The array list is used to implement dynamic arrays in Java.

**19. What are the applications of dequeue?**

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- A. A-Steal job scheduling algorithm
- B. Can be used as both stack and queue
- C. To find the maximum of all sub-arrays of size k
- D. All of the mentioned

**Answer - D.** All of the mentioned

**Explanation:**

All of the mentioned can be implemented with a dequeue.

### 20. What is the best case complexity in building a heap?

- A.  $O(n \log n)$
- B.  $O(n^2)$
- C.  $O(n)$
- D.  $O(n \cdot \log n \cdot \log n)$

**Answer - C.**  $O(n)$

**Explanation:**

The best case complexity occurs in bottom-up construction when we have a sorted array given.