

## Aptitude Questions

*Solve the following and check with the answers given at the end.*

1. It was calculated that 75 men could complete a piece of work in 20 days. When work was scheduled to commence, it was found necessary to send 25 men to another project. How much longer will it take to complete the work?
2. A student divided a number by  $\frac{2}{3}$  when he required to multiply by  $\frac{3}{2}$ . Calculate the percentage of error in his result.
3. A dishonest shopkeeper professes to sell pulses at the cost price, but he uses a false weight of 950gm. for a kg. His gain is ...%.
4. A software engineer has the capability of thinking 100 lines of code in five minutes and can type 100 lines of code in 10 minutes. He takes a break for five minutes after every ten minutes. How many lines of codes will he complete typing after an hour?
5. A man was engaged on a job for 30 days on the condition that he would get a wage of Rs. 10 for the day he works, but he have to pay a fine of Rs. 2 for each day of his absence. If he gets Rs. 216 at the end, he was absent for work for ... days.
6. A contractor agreeing to finish a work in 150 days, employed 75 men each working 8 hours daily. After 90 days, only  $\frac{2}{7}$  of the work was completed. Increasing the number of men by \_\_\_\_\_ each working now for 10 hours daily, the work can be completed in time.
7. what is a percent of b divided by b percent of a?  
(a) a      (b) b      (c) 1      (d) 10      (e) 100
8. A man bought a horse and a cart. If he sold the horse at 10 % loss and the cart at 20 % gain, he would not lose anything; but if he sold the horse at 5% loss and the cart at 5% gain, he would

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lose Rs. 10 in the bargain. The amount paid by him was Rs.-  
\_\_\_\_\_ for the horse and Rs.\_\_\_\_\_ for the cart.

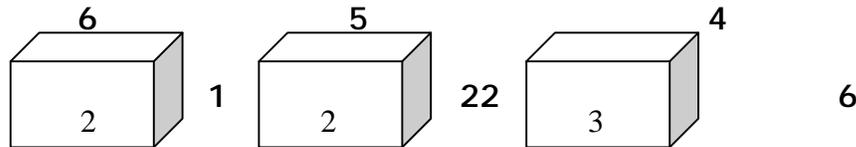
9. A tennis marker is trying to put together a team of four players for a tennis tournament out of seven available. males - a, b and c; females – m, n, o and p. All players are of equal ability and there must be at least two males in the team. For a team of four, all players must be able to play with each other under the following restrictions:

b should not play with m,  
c should not play with p, and  
a should not play with o.

Which of the following statements must be false?

1. b and p cannot be selected together
2. c and o cannot be selected together
3. c and n cannot be selected together.

10-12. The following figure depicts three views of a cube. Based on this, answer questions 10-12.



10. The number on the face opposite to the face carrying 1 is -  
\_\_\_\_\_ .
11. The number on the faces adjacent to the face marked 5 are -  
\_\_\_\_\_ .
12. Which of the following pairs does not correctly give the numbers on the opposite faces.  
(1) 6,5 (2) 4,1 (3) 1,3 (4) 4,2
13. Five farmers have 7, 9, 11, 13 & 14 apple trees, respectively in their orchards. Last year, each of them discovered that every tree in their own orchard bore exactly the same number of apples. Further, if the third farmer gives one apple to the first, and the fifth gives three to each of the second and the fourth, they would all have exactly the same number of apples. What were the yields per tree in the orchards of the third and fourth farmers?

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14. Five boys were climbing a hill. J was following H. R was just ahead of G. K was between G & H. They were climbing up in a column. Who was the second?

15-18 John is undecided which of the four novels to buy. He is considering a spy thriller, a Murder mystery, a Gothic romance and a science fiction novel. The books are written by Rothko, Gorky, Burchfield and Hopper, not necessary in that order, and published by Heron, Piegion, Blueja and sparrow, not necessary in that order.

(1) The book by Rothko is published by Sparrow.

(2) The Spy thriller is published by Heron.

(3) The science fiction novel is by Burchfield and is not published by Blueja.

(4) The Gothic romance is by Hopper.

15. Pigeon publishes \_\_\_\_\_.

16. The novel by Gorky \_\_\_\_\_.

17. John purchases books by the authors whose names come first and third in alphabetical order. He does not buy the books - \_\_\_\_\_.

18. On the basis of the first paragraph and statement (2), (3) and (4) only, it is possible to deduce that

1. Rothko wrote the murder mystery or the spy thriller

2. Sparrow published the murder mystery or the spy thriller

3. The book by Burchfield is published by Sparrow.

19. If a light flashes every 6 seconds, how many times will it flash in  $\frac{3}{4}$  of an hour?

20. If point P is on line segment AB, then which of the following is always true?

(1)  $AP = PB$  (2)  $AP > PB$  (3)  $PB > AP$  (4)  $AB > AP$  (5)  $AB > AP + PB$

21. All men are vertebrates. Some mammals are vertebrates. Which of the following conclusions drawn from the above statement is correct.

All men are mammals

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All mammals are men  
Some vertebrates are mammals.  
None

22. Which of the following statements drawn from the given statements are correct?

Given:

All watches sold in that shop are of high standard. Some of the HMT watches are sold in that shop.

- a) All watches of high standard were manufactured by HMT.
- b) Some of the HMT watches are of high standard.
- c) None of the HMT watches is of high standard.
- d) Some of the HMT watches of high standard are sold in that shop.

23-27.

- 1. Ashland is north of East Liverpool and west of Coshocton.
- 2. Bowling green is north of Ashland and west of Fredericktown.
- 3. Dover is south and east of Ashland.
- 4. East Liverpool is north of Fredericktown and east of Dover.
- 5. Fredericktown is north of Dover and west of Ashland.
- 6. Coshocton is south of Fredericktown and west of Dover.

23. Which of the towns mentioned is furthest of the north – west

- (a) Ashland                      (b) Bowling green                      (c) Coshocton

Coshocton

- (d) East Liverpool (e) Fredericktown

24. Which of the following must be both north and east of Fredericktown?

- (a) Ashland                      (b) Coshocton                      (c) East Liverpool
- I a only                      II b only                      III c only                      IV a & b                      V a & c

25. Which of the following towns must be situated both south and west of at least one other town?

- A. Ashland only
- B. Ashland and Fredericktown
- C. Dover and Fredericktown
- D. Dover, Coshocton and Fredericktown
- E. Coshocton, Dover and East Liverpool.

26. Which of the following statements, if true, would make the information in the numbered statements more specific?

- (a) Coshocton is north of Dover.

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- (b) East Liverpool is north of Dover
  - (c) Ashland is east of Bowling green.
  - (d) Coshocton is east of Fredericktown
  - (e) Bowling green is north of Fredericktown
27. Which of the numbered statements gives information that can be deduced from one or more of the other statements?  
(A) 1 (B) 2 (C) 3 (D) 4 (E) 6
28. Eight friends Harsha, Fakis, Balaji, Eswar, Dhinesh, Chandra, Geetha, and Ahmed are sitting in a circle facing the center. Balaji is sitting between Geetha and Dhinesh. Harsha is third to the left of Balaji and second to the right of Ahmed. Chandra is sitting between Ahmed and Geetha and Balaji and Eshwar are not sitting opposite to each other. Who is third to the left of Dhinesh?
29. If every alternative letter starting from B of the English alphabet is written in small letter, rest all are written in capital letters, how the month " September" be written.  
(1) SeptEMbEr (2) SEpTeMBEr (3) SeptemberR  
(4) SepteMber (5) None of the above.
30. The length of the side of a square is represented by  $x+2$ . The length of the side of an equilateral triangle is  $2x$ . If the square and the equilateral triangle have equal perimeter, then the value of  $x$  is \_\_\_\_\_.
31. It takes Mr. Karthik  $y$  hours to complete typing a manuscript. After 2 hours, he was called away. What fractional part of the assignment was left incomplete?
32. Which of the following is larger than  $\frac{3}{5}$ ?  
(1)  $\frac{1}{2}$  (2)  $\frac{39}{50}$  (3)  $\frac{7}{25}$  (4)  $\frac{3}{10}$  (5)  $\frac{59}{100}$
33. The number that does not have a reciprocal is \_\_\_\_\_.
34. There are 3 persons Sudhir, Arvind, and Gauri. Sudhir lent cars to Arvind and Gauri as many as they had already. After some time Arvind gave as many cars to Sudhir and Gauri as many as they have. After sometime Gauri did the same thing. At the end of this transaction each one of them had 24. Find the cars each originally had.
35. A man bought a horse and a cart. If he sold the horse at 10 % loss and the cart at 20 % gain, he would not lose anything; but if he sold the horse at 5% loss and the cart at 5% gain, he would

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lose Rs. 10 in the bargain. The amount paid by him was Rs.-  
\_\_\_\_\_ for the horse and Rs.\_\_\_\_\_ for the cart.

Answers:

1. **Answer:**  
30 days.

**Explanation:**

**Before:**

$$\begin{aligned}\text{One day work} &= 1 / 20 \\ \text{One man's one day work} &= 1 / (20 * 75)\end{aligned}$$

**Now:**

$$\begin{aligned}\text{No. Of workers} &= 50 \\ \text{One day work} &= 50 * 1 / (20 * 75)\end{aligned}$$

The total no. of days required to complete the work =  $(75 * 20) / 50 = 30$

2. **Answer:**  
0 %

**Explanation:**

$$\text{Since } 3x / 2 = x / (2 / 3)$$

3. **Answer:**  
5.3 %

**Explanation:**

He sells 950 grams of pulses and gains 50 grams.

If he sells 100 grams of pulses then he will gain  $(50 / 950) * 100 = 5.26$

4. **Answer:**  
250 lines of codes

5. **Answer:**  
7 days

**Explanation:**

The equation portraying the given problem is:

$10 * x - 2 * (30 - x) = 216$  where x is the number of working days.

Solving this we get  $x = 23$

Number of days he was absent was 7 (30-23) days.

6. **Answer:**  
150 men.

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**Explanation:**

$$\begin{aligned}\text{One day's work} &= 2 / (7 * 90) \\ \text{One hour's work} &= 2 / (7 * 90 * 8) \\ \text{One man's work} &= 2 / (7 * 90 * 8 * 75)\end{aligned}$$

The remaining work (5/7) has to be completed within 60 days, because the total number of days allotted for the project is 150 days.

So we get the equation

$$(2 * 10 * x * 60) / (7 * 90 * 8 * 75) = 5/7 \text{ where } x \text{ is the number of men working after the } 90^{\text{th}} \text{ day.}$$

We get  $x = 225$

Since we have 75 men already, it is enough to add only 150 men.

7. **Answer:**

(c) 1

**Explanation:**

$$\begin{aligned}\text{a percent of b} &: (a/100) * b \\ \text{b percent of a} &: (b/100) * a \\ \text{a percent of b divided by b percent of a} &: ((a / 100) * b) / (b/100) * a = 1\end{aligned}$$

8. **Answer:**

Cost price of horse = Rs. 400 & the cost price of cart = 200.

**Explanation:-**

Let  $x$  be the cost price of the horse and  $y$  be the cost price of the cart.

In the first sale there is no loss or profit. (i.e.) The loss obtained is equal to the gain.

$$\text{Therefore } (10/100) * x = (20/100) * y$$

$$X = 2 * y \text{ -----(1)}$$

In the second sale, he lost Rs. 10. (i.e.) The loss is greater than the profit by Rs. 10.

$$\text{Therefore } (5 / 100) * x = (5 / 100) * y + 10 \text{ -----}$$

(2)

Substituting (1) in (2) we get

$$(10 / 100) * y = (5 / 100) * y + 10$$

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$$(5 / 100) * y = 10$$
$$y = 200$$

$$\text{From (1) } 2 * 200 = x = 400$$

9. **Answer:**

3.

**Explanation:**

Since inclusion of any male player will reject a female from the team. Since there should be four member in the team and only three males are available, the girl, n should included in the team always irrespective of others selection.

10. **Answer:**

5

11. **Answer:**

1,2,3 & 4

12. **Answer:**

B

13. **Answer:**

11 & 9 apples per tree.

**Explanation:**

Let a, b, c, d & e be the total number of apples bored per year in A, B, C, D & E 's orchard. Given that  $a + 1 = b + 3 = c - 1 = d + 3 = e - 6$

But the question is to find the number of apples bored per tree in C and D 's orchard. If is enough to consider  $c - 1 = d + 3$ .

Since the number of trees in C's orchard is 11 and that of D's orchard is 13. Let x and y be the number of apples bored per tree in C & d 's orchard respectively.

$$\text{Therefore } 11x - 1 = 13y + 3$$

By trial and error method, we get the value for x and y as 11 and 9

14. **Answer:**

G.

**Explanation:**

The order in which they are climbing is R – G – K – H – J

15 – 18

**Answer:**

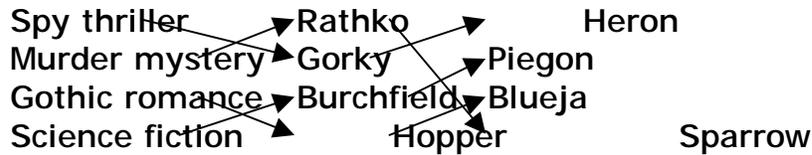
Novel Name

Author

Publisher

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**Explanation:**

Given



Since Blueja doesn't publish the novel by Burchfield and Heron publishes the novel spy thriller, Piegion publishes the novel by Burchfield.

Since Hopper writes Gothic romance and Heron publishes the novel spy thriller, Blueja publishes the novel by Hopper.

Since Heron publishes the novel spy thriller and Heron publishes the novel by Gorky, Gorky writes Spy thriller and Rathko writes Murder mystery.

19. **Answer:**  
451 times.

**Explanation:**

There are 60 minutes in an hour.

In  $\frac{3}{4}$  of an hour there are  $(60 * \frac{3}{4})$  minutes = 45 minutes.

In  $\frac{3}{4}$  of an hour there are  $(60 * 45)$  seconds = 2700 seconds.

Light flashed for every 6 seconds.

In 2700 seconds  $2700/6 = 450$  times.

The count start after the first flash, the light will flashes 451 times in  $\frac{3}{4}$  of an hour.

20. **Answer:**  
(4)

**Explanation:**



Since p is a point on the line segment AB,  $AB > AP$

21. **Answer:** (c)  
22. **Answer:** (b) & (d).

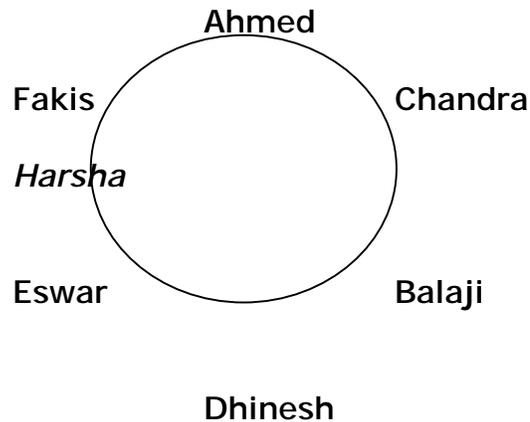
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23 - 27. *Answer:*

28. *Answer:* Fakis

*Explanation:*

*Geetha*



29. *Answer:*

(5).

*Explanation:*

Since every alternative letter starting from B of the English alphabet is written in small letter, the letters written in small letter are b, d, f...

In the first two answers the letter E is written in both small & capital letters, so they are not the correct answers. But in third and fourth answers the letter is written in small letter instead capital letter, so they are not the answers.

30. *Answer:*

$$x = 4$$

*Explanation:*

Since the side of the square is  $x + 2$ , its perimeter =  $4(x + 2) = 4x + 8$

Since the side of the equilateral triangle is  $2x$ , its perimeter =  $3 * 2x = 6x$

Also, the perimeters of both are equal.

$$(i.e.) 4x + 8 = 6x$$

$$(i.e.) 2x = 8 \Rightarrow x = 4.$$

31. *Answer:*

$$(y - 2) / y.$$

*Explanation:*

To type a manuscript karthik took  $y$  hours.

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Therefore his speed in typing =  $1/y$ .  
He was called away after 2 hours of typing.  
Therefore the work completed =  $1/y * 2$ .  
Therefore the remaining work to be completed =  $1 - 2/y$ .  
(i.e.) work to be completed =  $(y-2)/y$

32. **Answer:**  
(2)

33. **Answer:**  
1

**Explanation:**

One is the only number exists without reciprocal because the reciprocal of one is one itself.

34. **Answer:**

Sudhir had 39 cars, Arvind had 21 cars and Gauri had 12 cars.

**Explanation:**

Sudhir	Arvind	Gauri
Finally	24	24
24		
Before Gauri's transaction	12	12
48		
Before Arvind's transaction	6	42
24		
Before Sudhir's transaction	39	21
12		

35. **Answer:**

Cost price of horse: Rs. 400 &  
Cost price of cart: Rs. 200

**Explanation:**

Let  $x$  be the cost of horse &  $y$  be the cost of the cart.  
10 % of loss in selling horse = 20 % of gain in selling the

cart

$$\text{Therefore } (10 / 100) * x = (20 * 100) * y \\ \Rightarrow x = 2y \text{ -----(1)}$$

5 % of loss in selling the horse is 10 more than the 5 % gain in selling the cart.

$$\text{Therefore } (5 / 100) * x - 10 = (5 / 100) * y \\ \Rightarrow 5x - 1000 = 5y$$

Substituting (1)

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