

**Numerical Aptitude and  
Reasoning Ability tests  
in Competitive Exams  
PART-2**

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Q 26 - Find the number of bricks, each measuring 24 cm x 12 cm x 8 cm, required to construct a wall 24 m long, 8m high and 60 cm thick.

A - 12500

B - 11500

C - 12000

D - 10000

**Answer - A**

**Explanation**

Volume of the wall =  $(1800 \times 600 \times 90) \text{ cm}^3$ .

Volume of 1 brick =  $(36 \times 18 \times 12) \text{ cm}^3$ .

Number of bricks =  $((1800 \times 600 \times 90) / (36 \times 18 \times 12)) = 12500$

Q 27 - A room is 30 m long and 24 m broad. If the sum of the areas of the floor and the ceiling is equal to the sum of the areas of four walls, the volume of the hall is:

A - 96 m<sup>3</sup>

B - 960 m<sup>3</sup>

C - 9600 m<sup>3</sup>

D - 96000 m<sup>3</sup>

**Answer - C**

**Explanation**

Let the height be H

$$2(30 + 24) \times H = 2(30 \times 24)$$

$$\Rightarrow H = \frac{2(30 \times 24)}{2(30 + 24)} = \frac{30 \times 24}{54} = \frac{40}{3} \text{ m}$$

$$\Rightarrow \text{Volume} = 30 \times 24 \times \frac{40}{3} = 9600 \text{ m}^3$$

Q 28 - If the volume of a cylindrical tank is 3696 m<sup>3</sup> and the diameter of its base is 28 m, then find the depth of the tank.

A - 5 m

B - 6 m

C - 8 m

D - 14 m

**Answer - B**

**Explanation**

Let the depth of the tank be H meters. Then,

$$\text{Volume} = \pi R^2 H = \pi \times 14^2 \times H = 3696 \text{ m}^3$$

$$\Rightarrow H = 6 \text{ m}$$

Q 29 - How many steel rods, each of length 14 m and diameter 4 cm can be made out of 1.76 m<sup>3</sup> of steel?

A - 80

B - 100

C - 110

D - 120

**Answer - B**

**Explanation**

$$\text{Volume of 1 rod} = \left( \left( \frac{22}{7} \right) \times \left( \frac{2}{100} \right) \times \left( \frac{2}{100} \right) \times 14 \right) \text{ m}^3 = 11/625 \text{ m}^3$$

$$\text{Volume of steel} = 1.76 \text{ m}^3$$

$$\text{Number of rods} = (1.76 \times 625/11) = 100.$$

Q 30 - Find the volume and surface area of a Box 32 m long, 28 m broad and 14 m high.

A -  $12544 \text{ m}^3$  &  $3472 \text{ m}^2$

B -  $12500 \text{ m}^3$  &  $3472 \text{ m}^2$

C -  $12600 \text{ m}^3$  &  $3400 \text{ m}^2$

D -  $12000 \text{ m}^3$  &  $3000 \text{ m}^2$

**Answer - A**

**Explanation**

$$\text{Volume} = (32 \times 28 \times 14) \text{ m}^3 = 12544 \text{ m}^3.$$

$$\text{Surface area} = [2 (32 \times 28 + 28 \times 14 + 32 \times 14)] \text{ m}^2 = (2 \times 1736) \text{ m}^2 = 3472 \text{ m}^2.$$

Q 31 - Find the length of the longest pole that can be placed in a room 24 m long 16 m broad and 18 m high.

A - 34 m

B - 24 m

C - 14 m

D - 4 m

**Answer - A**

**Explanation**

Length of the longest pole =  $\sqrt{(24^2 + 16^2 + 18^2)} = 34$  m

Q 32 - A wheel makes 2000 revolutions in covering a distance of 44 km. Find the radius of the wheel.

A - 12 m

B - 14 m

C - 13 m

D - 15 m

**Answer - B**

**Explanation**

Distance covered in one revolution =  $((44 \times 2000)/1000) = 88\text{m}$ .

$$2\pi R = 88$$

$$2 \times (22/7) \times R = 88$$

$$\Rightarrow R = 88 \times (7/44) = 14 \text{ m}.$$

Q 33 - A rectangular block 35 cm x 42 cm x 70 cm is cut up into an exact number of equal cubes. Find the least possible number of cubes.

<u>A - 300</u>	<u>B - 200</u>	<u>C - 100</u>	<u>D - 50</u>
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**Answer - A**

**Explanation**

Volume of the block = (35 cm x 42 cm x 70 cm)  $\text{cm}^3$  =  
 $300 \times 73 \text{ cm}^3$ .

Side of the largest cube = H.C.F. of 35 cm , 42 cm and 70 cm  
= 7 cm.

Volume of this cube = (7 x 7 x 7)  $\text{cm}^3$  =  $73 \text{ cm}^3$ .

Number of cubes =  $300 \times 73 / 73 = 300$ .

Q 34 - Find the volume and surface area of a sphere of radius 21 cm.

A - 38008 cm<sup>3</sup> & 5444 cm<sup>2</sup>

B - 38808 cm<sup>3</sup> & 5544 cm<sup>2</sup>

C - 38888 cm<sup>3</sup> & 4544 cm<sup>2</sup>

D - 30008 cm<sup>3</sup> & 5544 cm<sup>2</sup>

**Answer - B**

**Explanation**

$$\text{Volume} = \left(\frac{4}{3}\right)\pi r^3 = \left(\frac{4}{3}\right) * \left(\frac{22}{7}\right) * (21) * (21) * (21) \text{ cm}^3 = 38808 \text{ cm}^3.$$

$$\text{Surface area} = 4\pi r^2 = (4 * \left(\frac{22}{7}\right) * (21) * (21)) \text{ cm}^2 = 5544 \text{ cm}^2$$

Q 35 - The diameter of garden roller is 2.8 m and it is 3 m long. The area covered by the roller in 10 revolutions is?

A - 132 m<sup>2</sup>

B - 264 m m<sup>2</sup>

C - 132/5 m<sup>2</sup>

D - 264/5 m<sup>2</sup>

**Answer - B**

**Explanation**

Curved surface area of roller =  $(2 \pi R H) = 2 \times \pi \times 1.4 \times 3 = 132/5$ .

Area covered by the roller =  $10 \times (132/5) = 264 \text{ m}^2$

## Number System - Time & Work

1. If A can do a piece of work in  $n$  days, then A's 1 day work =  $1/n$ .
2. If A's 1 day work =  $1/n$ , then A can finish the work in  $n$  days.
3. If A is twice as good a workmen as B, then
  - Ratio of work done by A and B in the same time = 2:1
  - Ratio of time taken by A and B in doing the same work = 1:2

## TIME AND WORK PROBLEMS

Q36. A can do a piece of work in 15 days while B can do it in 10 days. How long will they take together to do it?

**Solution :**

Using the above formula, if they work together, number of days taken to complete the work is

$$\begin{aligned} &= (15 \cdot 10) / (15 + 10) \\ &= 150 / 25 \\ &= 6 \end{aligned}$$

So, A and B can together can complete the work in 6 days.

Q 37 - A can do a bit of work in 8 days, which B alone can do in 10 days in how long . In how long both cooperating can do it?

A - 40/9 days

B - 41/9 days

C - 42/9 days

D - 43/9 days

**Answer - A**

**Explanation**

A's 1 day work =  $1/8$ , B's 1 day work =  $1/10$

$\therefore$  (A+B) 1 day work =  $(1/8 + 1/10) = 9/40$

Both cooperating can complete it in  $40/9$  days.

Q 38 - A and B can do a bit of work in 12 days. B and C can do it in 15 days while C and A can do it in 20 days. In how long will they complete it cooperating? Additionally, in how long can A alone do it?

<u>A - 10 days,</u> <u>30 days.</u>	<u>B - 15 days,</u> <u>20 days.</u>	<u>C - 20 days,</u> <u>40 days.</u>	<u>D - 10 days,</u> <u>50 days.</u>
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**Answer - A : Explanation**

(A+B)'s 1 day work =  $1/12$ ,

(B+C)'s 1 day work =  $1/15$ ,

(C+A)'S 1 day work =  $1/20$

Including:  $2(A+B+C)$ 's 1 day work =  $(1/12 + 1/15 + 1/20) = 12/60 = 1/5$



**EXPLANATION**

∴ (A+B+C) `s 1 day work =  $(\frac{1}{2} * \frac{1}{5}) = \frac{1}{10}$

∴ working together they can complete the work in 10 days.

A's 1 day work =  $(\frac{1}{10} - \frac{1}{15}) = \frac{1}{30}$ , B`s 1 day work =  $(\frac{1}{10} - \frac{1}{20}) = \frac{1}{20}$

C's 1 day work =  $(\frac{1}{10} - \frac{1}{12}) = \frac{1}{60}$

∴ A alone can take the necessary steps in 30 days

Q 39 - Person A can fabricate a divider in 30 days , while B alone can assemble it in 40 days, If they construct it together and get an installment of RS. 7000, what B's offer?

<u>A - 2000</u>	<u>B - 3000</u>	<u>C - 4000</u>	<u>D - 6500</u>
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**Answer - B**

**Explanation**

A's 1 days work =  $1/30$ ,

B's 1 day work =  $1/40$ ,

Proportion of their shares =  $1/30:1/40 = 4:3$

B's offer =  $(7000 * 3/7) = \text{Rs. } 3000$

Q 40 - Ram and sham together can complete a vocation in 8 days. Ram can do likewise work all alone in 12 days. To what extent will sham take to carry out the occupation without anyone else's input?

<u>A - 16 days</u>	<u>B - 20 days</u>	C - 24 days	<u>D - 30 days</u>
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Answer : C

Explanation

(Ram +sham)'s 1 day work =  $1/8$

, Ram 1 day work =  $1/12$

Sham 1 day work =  $(1/8-1/12) = 1/24$

∴ Sham alone can finish the work in 24 days.

Q 41 - A and B can do a bit of work in 45 days and 40 days . they started the work together however A leaves after a few days and B completed the remaining work in 23 days . After how long did A leaves?

<u>A - 6 days</u>	<u>B - 8 days</u>	C - 9 days	<u>D - 12 days</u>
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Answer : C

Explanation

Work done by B in 23 days =  $(23 * 1/40) = 23/40$  ; remaining work =  $(1 - 23/40) = 17/40$

$(A+B)$ 's 1 day work =  $(1/45 + 1/40) = (8+9)/360 = 17/360$

$17/360$  work is done by  $(A+B)$  in 1 day.

$17/40$  work is done by them in  $(360/17 * 17/40) = 9$  days

Q 42: 9 youngsters can finish a bit of work in 360 days. 18 men can finish the same work of piece in 72 days and 12 ladies can finish it in 162 days. In how long can 4 men, 12 ladies and 10 kids together finish the bit of work?

A - 68 days

B - 81 days

C - 96 days

D - 124 days

Answer : B



**EXPLANATION**

## Explanation

9 children 1 day work =  $1/360 \Rightarrow$  1 child 1 day work =  $1/3240$

18 man 1 day work =  $1/72 \Rightarrow$  1 man 1 day work =  $1/1296$

12 women 1 day work =  $1/162 \Rightarrow$  1 women 1 day work =  $1/1944$

(4men +12 women +10 children) 1 day work =  $(4/1296+$   
 $12/1944+10/3240)$

$= (1/324+1/162+1/324) = 4/324 = 1/81$

Hence they can finish the work in 81 days.

Q 43 - If 5 men or 9 ladies can complete a bit of work in 19 days, 3 men and 6 ladies will do likewise work in

A - 10 days

B - 12 days

C - 13 days

D - 15 days

Answer : D

Explanation

5 men 1 day work =  $1/19 \Rightarrow$  1 man's 1 day work =  $1/95$

9 women 1 day work =  $1/19 \Rightarrow$  1 women 1 day work =  $1/171$

(3 men + 6 women) 1 day work =  $(3/95 + 6/171) =$

$(27+30)/855 = 57/ 855 = 1/15$

$\therefore$  3 men and 6 women can finish the work in 15 days.

## Number System - Boats & Streams

1. In water, the direction along the stream is called Downstream. And the direction against the stream is called Upstream.
2. If the speed of the boat in still water is  $u$  km/hr and the speed of the stream is  $v$  km/hr, then:
  1. Speed downstream =  $(u + v)$  km/hr
  2. Speed upstream =  $(u - v)$  km/hr
3. If the speed downstream is  $a$  km/hr and the speed upstream is  $b$  km/hr, then:
  1. Speed in still water =  $\frac{1}{2}(a + b)$  km/hr

2. Rate of the stream =  $\frac{1}{2} (a - b)$  km/hr
4. When the distance covered downstream and upstream are equal, we can write:  $(u + v)t_1 = (u - s)t_2$  where  $t_1$  and  $t_2$  are different time taken.

Q 44 - Speed of boat in still water is 16 km/hr. If the speed of the stream is 4 km/hr, find its downstream and upstream speeds.

A - 15,5

B - 20,12

C - 10,6

D - 18,10

**Answer - B**

**Explanation**

Downstream Speed =  $u + v = 16 + 4 = 20$  km/hr

Upstream Speed =  $u - v = 16 - 4 = 12$  km/hr

Q 45 - A man can row downstream at 18 km/hr and upstream at 12 km/hr. Find his speed in still water and the rate of the current.

<u>A - 16,3</u>	<u>B - 15,4</u>	<u>C - 15,3</u>	<u>D - 16,4</u>
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**Answer - C :**

**Explanation**

Speed of the boat or swimmer in still water =  $1/2 *$

(Downstream Speed + Upstream Speed)

$$= 1/2 * (18+12)$$

$$= 15 \text{ km/hr}$$

Speed of the current =  $1/2 *$  (Downstream Speed - Upstream Speed)

$$= 1/2 * (18-12)$$

$$= 3 \text{ km/hr}$$

Q 46 - The speed of river Ganga is 5 km/hr. A motor boat travels 28 km upstream and then returns downstream to the starting point. If its speed in still water be 9 km/hr, find the total journey time.

<u>A - 5 hr</u>	<u>B - 8 hr</u>	<u>C - 9 hr</u>	<u>D - 10 hr</u>
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**Answer - C : Explanation**

We know, Downstream speed =  $u + v = 9 + 5 = 14$  km/hr

Upstream Speed =  $u - v = 9 - 5 = 4$  km/hr

Speed = Distance/Time

$\therefore$  Time = Distance/Speed

$\therefore$  Total time taken =  $t_1 + t_2$

$$= 28/4 + 28/14$$

$$= 7 + 2 = 9 \text{ hr}$$



Q 48 - A boat running downstream covers a distance of 30 kms in 2 hrs. While coming back the boat takes 6 hrs to cover the same distance. If the speed of the current is half that of the boat, what is the speed of the boat?

<u>A - 15 km/hr</u>	<u>B - 54 km/hr</u>	<u>C - 10 km/hr</u>	<u>D - None of these</u>
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**Answer - C : Explanation**

Downstream Speed =  $30/2 = 15$  km/hr

Upstream Speed =  $30/6 = 5$  km/hr

Speed of the boat in still water =  $1/2 * (\text{downstream speed} + \text{upstream speed})$

=  $1/2 * (15+5)$  ; = 10 km/hr

Q 49 - A man columns 30 km downstream and 18 km upstream, taking 5 hours every time. Every time what is the speed of the current?

A - 1.2 km/hr	<u>B - 1 km/hr</u>	<u>C - 2 km/hr</u>	<u>D - 1.5 km/hr</u>
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Answer : A : Explanation

Speed downstream =  $30/5$  km/hr = 6km/hr`

Speed upstream =  $18/5$  km/hr = 3.6 km/hr`

Speed of the current =  $1/2 (6-3.6)$  km/hr =  $2.4/2$  km/hr = 1.2 km/hr

Q 50 - Aman lines to a spot 48 km far off and in 14 hours. He finds that he can push 4km with the stream in the same time as 3km against the stream. The rate of the stream is:

<u>A - 0.5 km/hr</u>	<u>B - 1 km/hr</u>	<u>C - 3.5 km/hr</u>	<u>D - 1.8 km/hr</u>
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Answer : A : Explanation

Speed downstream =  $30/5$  km/hr = 6km/hr`

Speed upstream =  $18/5$  km/hr = 3.6 km/hr`

Speed of the current =  $1/2 (6-3.6)$  km/hr =  $2.4/2$  km/hr = 1.2 km/hr

Q 51 - A vessel goes 6 km in an hour in still water. It requires thrice as much investment in covering the same separation against the current. Velocity of the current is:

<u>A - 2 km/hr</u>	<u>B - 3 km/hr</u>	C - 4 km/hr	<u>D - 5 km/hr.</u>
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Answer : C

Explanation

Speed in still water = 6 km/hr.

Speed against the current =  $\frac{6}{3}$  km/hr = 2 km/hr`

Let the speed of the current be x km/hr`  $6 - x = 2 \Rightarrow x = 4$  km/hr.

## Aptitude - Trains

### Important Terms

1. Speed in km/hr

$$a \text{ km/hr} = (a * 5 / 18) \text{ m/s.}$$

2. Speed in m/s

$$a \text{ m/s} = (a * 18/5) \text{ km/hr.}$$

3. Time taken by a train of length L metres to pass a pole or a standing man or a signal post is equal to the time taken by the train to cover L Metres.

4. Time taken by a train of length L metres to pass a stationary object of length b metres is the time taken by the train to cover (L + b) metres.

5. Suppose two train or two bodies are moving in the same direction at  $u$  m/s and  $v$  m/s , where  $u > v$ , then their relative speed =  $(u - v)$  m/s.
6. Suppose two trains or two bodies are moving in opposite directions at  $u$  m/s and  $v$  m/s , then their relative speed =  $(u + v)$  m/s.
7. If two trains of length  $a$  metres and  $b$  metres are moving in opposite directions at  $u$  m/s and  $v$  m/s, then time taken by the trains to cross each other =  $(a+b) / (u+ v)$  sec.
8. If two train s of length  $a$  metres and  $b$  metres are moving in the same direction at  $u$  m/s and  $v$  m/s , then the time taken by the faster train to cross the slower train =  $(a+b) / (u + v )$  sec.

9. If two train ( or bodies) start at the same time from points A and B towards each other and after crossing they take a and b sec in reaching B and A respectively, then  
( A speed) : ( B speed) = (  $\sqrt{b}$  :  $\sqrt{a}$  ).

Q 52 - What is 90 kmph as metres per second?

<u>A - 15 m /sec</u>	<u>B - 20 m /sec</u>	<u>C - 25 m /sec</u>	<u>D - 30 m /sec</u>
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**Answer - C**

**Explanation**

$$90 \text{ kmph} = (90 * 5/18) \text{ m/sec} = 25 \text{ m /sec.}$$

Q 53 - What is 35 m/sec as km/hr?

<u>A - 123 km/hr</u>	<u>B - 124 km/hr</u>	<u>C - 125 km/hr</u>	<u>D - 126 km/hr</u>
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**Answer - D**

**Explanation**

$$35 \text{ m/sec} = (35 * 18 / 5) \text{ km/hr} = 126 \text{ km/hr.}$$

Q 53 - A 75m long train is running at 54 km/hr. In how much time will it cross an electric pole?

<u>A - 25 sec</u>	<u>B - 20 sec</u>	<u>C - 15 sec</u>	<u>D - 5 sec</u>
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**Answer - D**

**Explanation**

Speed of the train =  $( 54 * 5 / 18 )$  m/sec = 15 m / sec.

Time taken to cross an electric pole = Time taken to cover  
75m

=  $( 75 / 15 )$  sec = 5 sec.

Q 54 - A 415 m long train is running at 63 km/hr. In how much time will it cross a tunnel 285 m long?

<u>A - 40 sec</u>	<u>B - 50 sec</u>	<u>C - 60 sec</u>	<u>D - 70 sec</u>
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**Answer - A**

**Explanation**

Speed of the train =  $(63 * 5 / 18)$  m/sec =  $35/2$  m/sec.

Time taken to cross the tunnel = Time taken to cover  $(415 + 285)$  m

=  $(700 * 2/35)$  sec = 40 sec.

Q 55 - A train 125m long is running at 50 km/ hr. In what time will it pass a man , running at 5 km/hr in the same direction in which the train is going?

<u>A - 22 sec</u>	<u>B - 20 sec</u>	<u>C - 15 sec</u>	<u>D - 10 sec</u>
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**Answer - D**

**Explanation**

Speed of the train relative to man = ( 50 – 5 ) km/hr  
= ( 45 \* 5 / 18 ) m/sec = 25/2 m/ sec.

Distance covered in passing the man = 125m.

∴ Time taken = 125 / ( 25/2 ) sec = ( 125 \* 2 / 25 ) sec = 10 sec.

Q 56 - A train 132m long passes a telegraph post in 6 seconds. The speed of the train is

<u>A - 70 kmph</u>	<u>B - 72 kmph</u>	<u>C - 79.2 kmph</u>	<u>D - 80 kmph</u>
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Answer : C

Explanation

$$\text{speed} = (132/6)\text{m/sec} = 22 \text{ m/sec.}$$

$$= (22 * 18/5) \text{ kmph} = (396/5) = 79.2 \text{ kmph}$$

Q 57 - A train travelling at a speed of 30 m/sec crosses a platform 600 m long in 30 sec. The length of the train is?

<u>A - 120 m</u>	<u>B - 150 m</u>	<u>C - 200 m</u>	D - 300 m
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Answer : D

Explanation

Let the length of the train be  $X$  m . then its speed  $= (600+x)/30$  m/sec.

$$\therefore (600+X)/30 = 30 \Rightarrow 600+x = 900 \Rightarrow x = 300\text{m}$$

Q 58 - Two trains A and B start running together from the same point in the same direction at 60 kmph and 72 kmph. If the length of each train is 240 m, how long will it take for the train B to cross train A ?

<u>A - 1 min. 12</u> <u>sec.</u>	<u>B - 1 min.24</u> <u>sec.</u>	<u>C - 2 min. 12</u> <u>sec.</u>	<u>D - 2 min. 24</u> <u>sec.</u>
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Answer : D : Explanation

Relative speed  $= (72 - 60) \text{ kmph} = 12 \text{ kmph} = (12 * 5/18) \text{ m/sec} = 10/3 \text{ m/sec.}$

Total distance covered  $= (240 + 240) \text{ m} = 480 \text{ m}$

Required time  $= (480 * 3/10) \text{ sec.} = 144 \text{ sec.} = 2 \text{ min.} 24 \text{ sec.}$

## Aptitude - Speed and Distance

Formulae

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}}$$

$$\text{Time} = \frac{\text{Distance}}{\text{Speed}}$$

$$\mathbf{P \text{ km/hr} = (P \times \frac{5}{18}) \text{ m/sec}}$$

$$\mathbf{P \text{ m/sec} = (P \times \frac{18}{5}) \text{ km/hr}}$$

If the ratio of the speeds of P and Q is p:q, then the ratio of the times taken by them to cover the same distance is

$$\frac{1}{p} : \frac{1}{q} \text{ or } q : p$$

The average speed of the journey is

$$\left( \frac{2pq}{p+q} \right) \text{ km/hr}$$

if a man covers a certain distance at p km/hr and an equal distance at q km/hr

Q 59 - What is meters/sec for 54 km/hr?

<u>A - 15 m/sec</u>	<u>B - 20 m/sec</u>	<u>C - 25 m/sec</u>	<u>D - 30 m/sec</u>
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**Answer - A**

**Explanation**

$$54 \text{ km/hr} = (54 * 5/18) \text{ m/sec} = 15 \text{ m/sec.}$$

Q 60 - What is km/hr for 16 m/sec?

A - 53.6km/hr

B - 55.6km/hr

C - 57.6km/hr

D - 59.6km/hr

**Answer - C**

**Explanation**

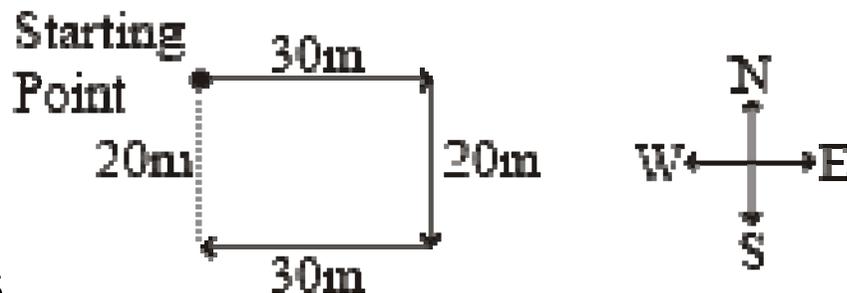
$16 \text{ m/sec} = (16 * 18/5) \text{ km/hr} = 288/5 \text{ km/hr} = 57.6 \text{ km/hr.}$

## Direction Sense

**Q61.** Pravin walked 30 metres towards East, took a right turn and walked 20 metres, again took a right turn and walked 30 metres. How far was he from the starting point ?

1. 30 metres
2. 80 metres
3. 50 metres
4. 20 metres

Solution. (4): Diagram of Pravin walking direction is as

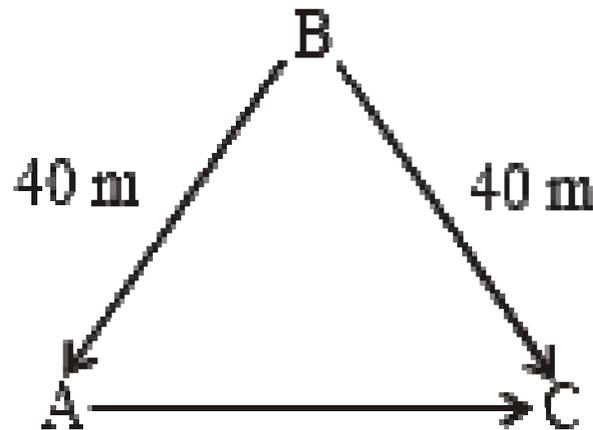
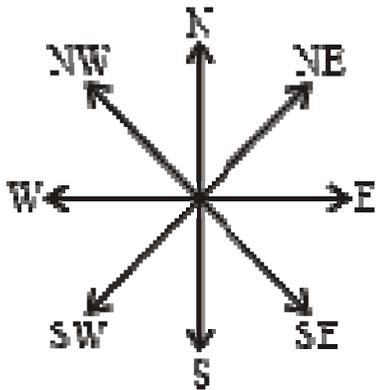


follows

Q62. A is 40 m south-west of B. C is 40 m south-east of B. Then, C is in which direction of A?

1. East
2. West
3. North-east
4. South

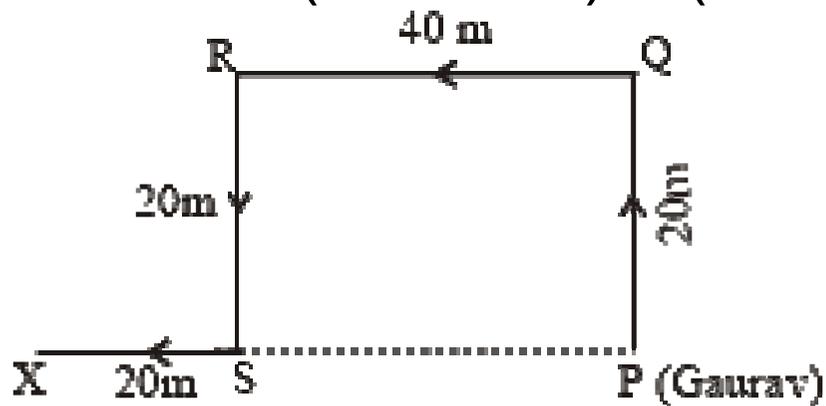
Solution. (1): As clear from the adjoining diagram, C lies to the east of A.



Q63. Gaurav walks 20 metres towards North. He then turns left and walks 40 metres. He again turns left and walks 20 metres. Further, he moves 20 metres after turning to the right. How far is he from his original position?

1. 20 metres
2. 30 metres
3. 50 metres
4. 60 metres

Solution. (4): The movements for Gaurav are as shown in figure. Clearly, Gaurav's distance from his initial position  $P = PX = (PS + SX) = (QR + SX) = (40 + 20) \text{ m} = 60 \text{ m}$ .



## Logical Sequence of Words

Q 64      1. Vapour 2. Cloud 3. Condensation 4. Rain

Options :

A - 4, 3, 2, 1

B - 3, 2, 1, 4

C - 2, 4, 3, 1

D - 1, 2, 3, 4

Answer : D

Explanation

First vapour will form cloud and after condensation of these vapour rain happens.

Q 65 1. Wall 2. Sand 3. Cement 4. Brick 5. Water

Options :

A - 2, 3, 5, 4, 1

B - 2, 5, 1, 4, 3

C - 1, 5, 3, 4, 2

D - 5, 3, 4, 2, 1

Answer : A

Explanation

First in sand we will mix cement and then water after that with brick we can make a wall.

Q 66      1. Idol 2. Rock 3. Dynamite 4. Mountain

Options :

A - 1, 3, 2, 4

B - 4, 1, 2, 3

C - 4, 3, 2, 1

D - 3, 2, 1, 4

Answer : C

Explanation

On mountain, by dynamite we can produce rocks and from rocks we can make idols. Hence, option C is correct.

Q 67      1. Picture 2. Idea 3. Drawing 4. Colour 5. Paper

Options :

A - 1, 2, 5, 4, 3

B - 4, 5, 3, 2, 1

C - 5, 4, 2, 3, 1

D - 2, 5, 4, 3, 1

Answer : D

Explanation

The correct sequence is

Idea- paper- colour- drawing-picture

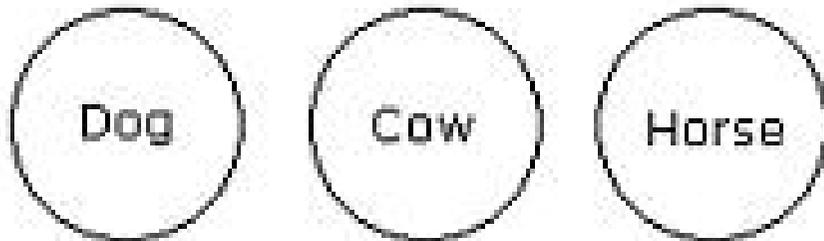
## Venn Diagram Aptitude

The use of Venn diagram is to test your ability about the relation between some items of a group by diagrams. By good understanding of diagram we can easily solve the problem.

**Some examples are given below:-**

Eg.1: If all the words are of different groups, then they will be shown by the diagram as given below.

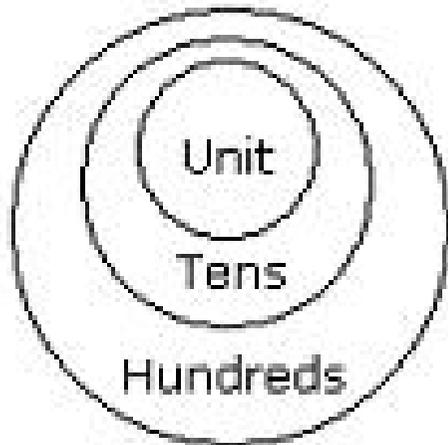
Dog, Cow, Horse



All these three are animals but of different groups, there is no relation between them. hence they will be represented by three different circles.

Eg.2: If the first word is related to second word and second word is related to third word. Then they will be shown by diagram as given below.

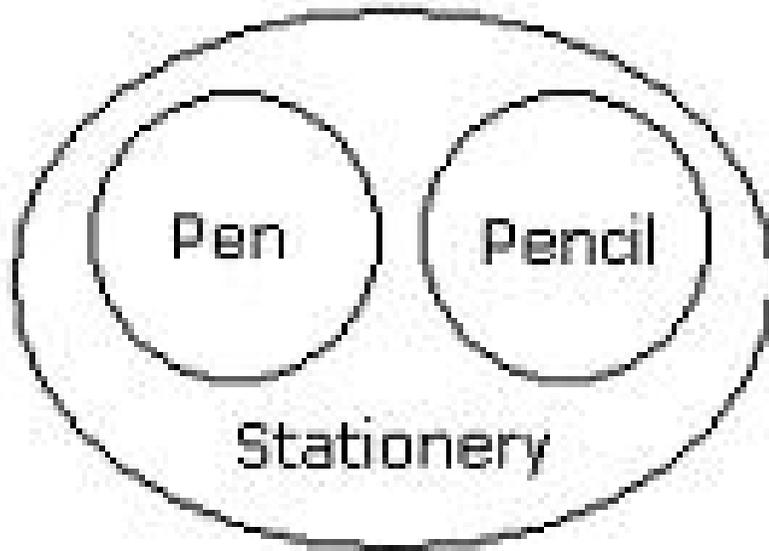
Unit, Tens, Hundreds



Ten units together make one Tens or in one tens, whole unit is available and ten tens together make one hundreds.

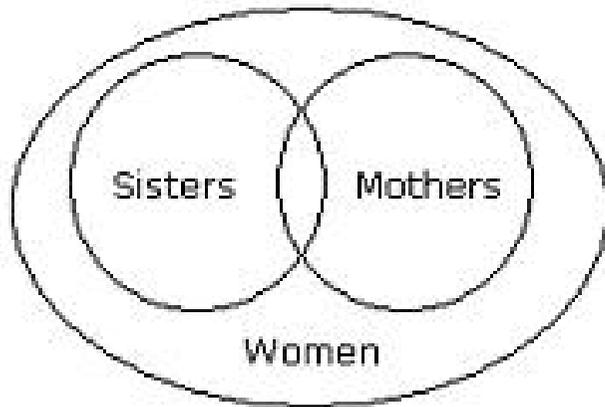
Eg.3: If two different items are completely related to third item, they will be shown as below.

Pen, Pencil, Stationery



Eg.4: If there is some relation between two items and these two items are completely related to a third item they will be shown as given below

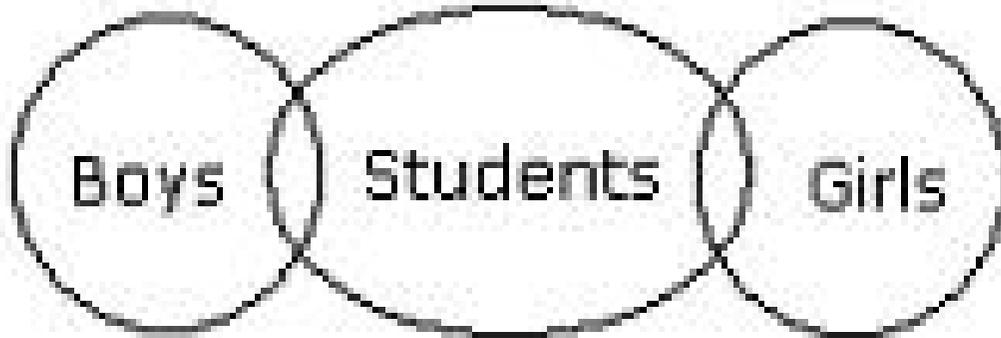
Women, Sisters, Mothers



Some sisters may be mothers and vice-versa. Similarly some mothers may not be sisters and vice-versa. But all the sisters and all the mothers belong to women group.

Eg.5: Two items are related to a third item to some extent but not completely and first two items totally different.

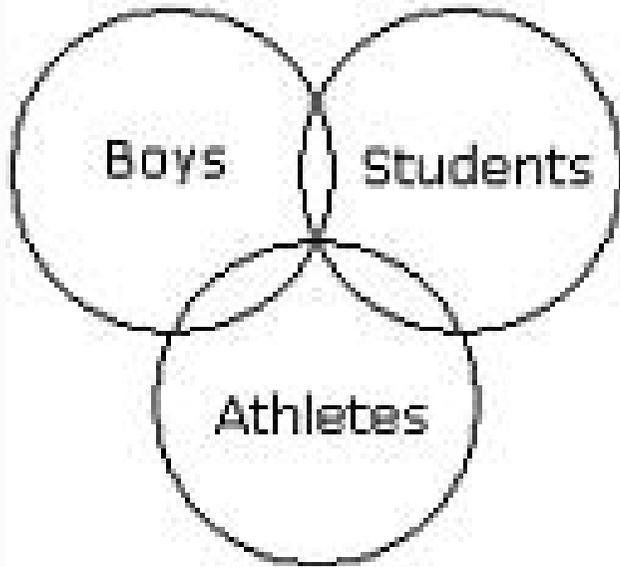
Students, Boys, Girls



The boys and girls are different items while some boys may be students. Similarly among girls some may be students.

Eg.6: All the three items are related to one another but to some extent not completely.

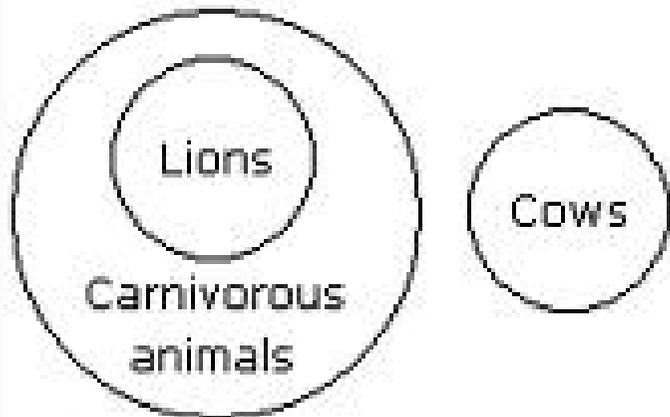
Boys, Students, Athletes



Some boys may be students and vice-versa. Similarly some boys may be athletes and vice-versa. Some students may be athletes and vice-versa.

Eg.7: Two items are related to each other completely and third item is entirely different from two.

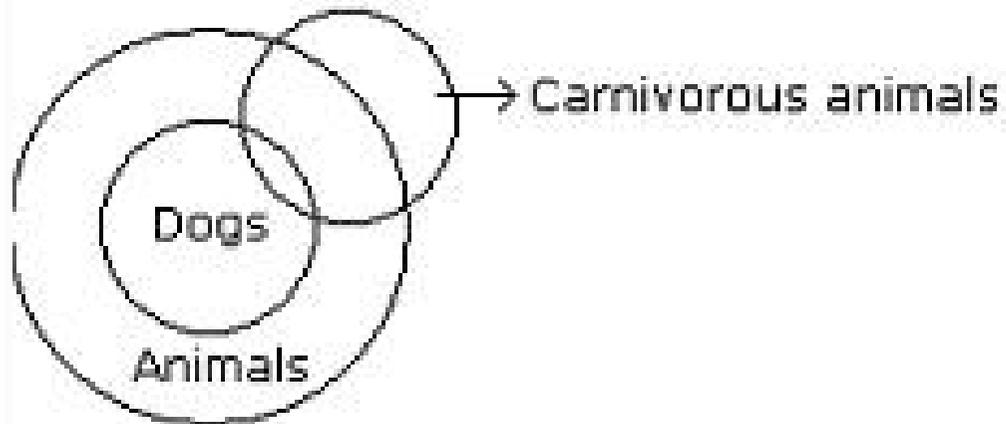
Lions, Carnivorous, Cows



All the lions are carnivorous but no cow is lion or carnivorous.

Eg.8: First item is completely related to second and third item is partially related to first and second item.

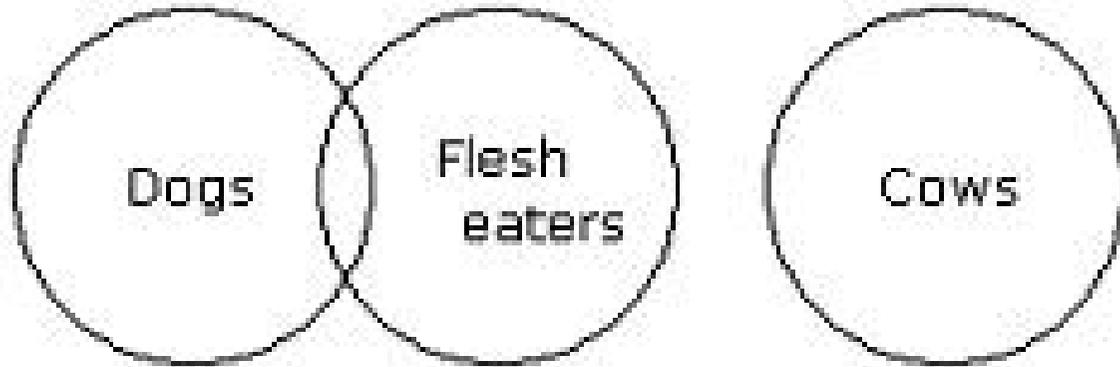
Dogs, Animals, Flesh-eaters



All the dogs are belonging to animals but some dogs are flesh eater but not all.

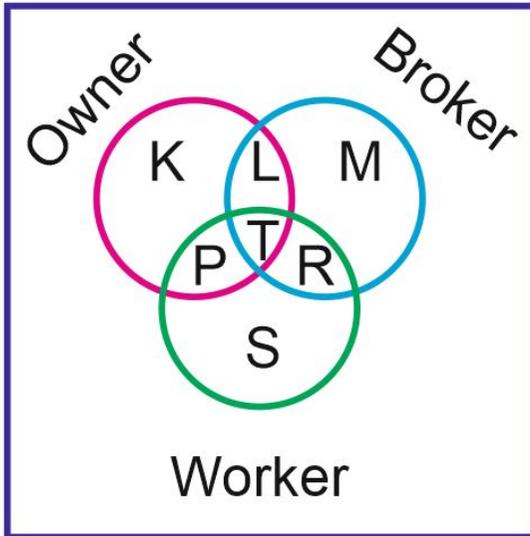
Eg.9: First item is partially related to second but third is entirely different from the first two.

Dogs, Flesh-eaters, Cows



Some dogs are flesh-eaters but not all while any dog or any flesh-eater cannot be cow.

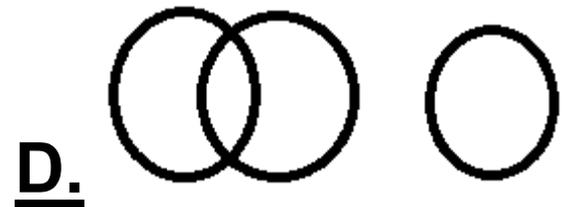
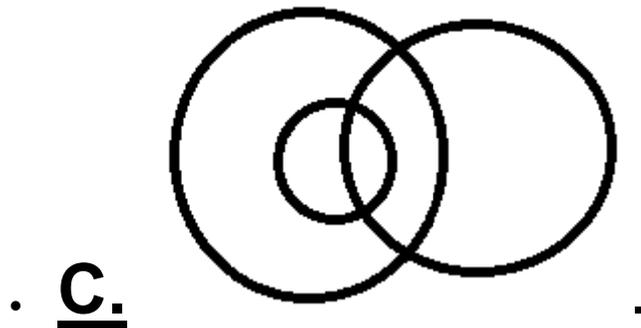
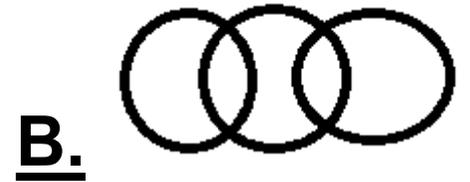
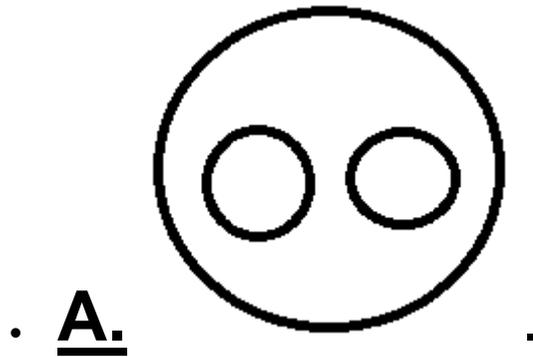
Q 68. The following figure shows the Owner, Broker & Worker. Identify the region representing all of three.



- (A) L
- (B) T
- (C) P
- (D) R

Ans . B

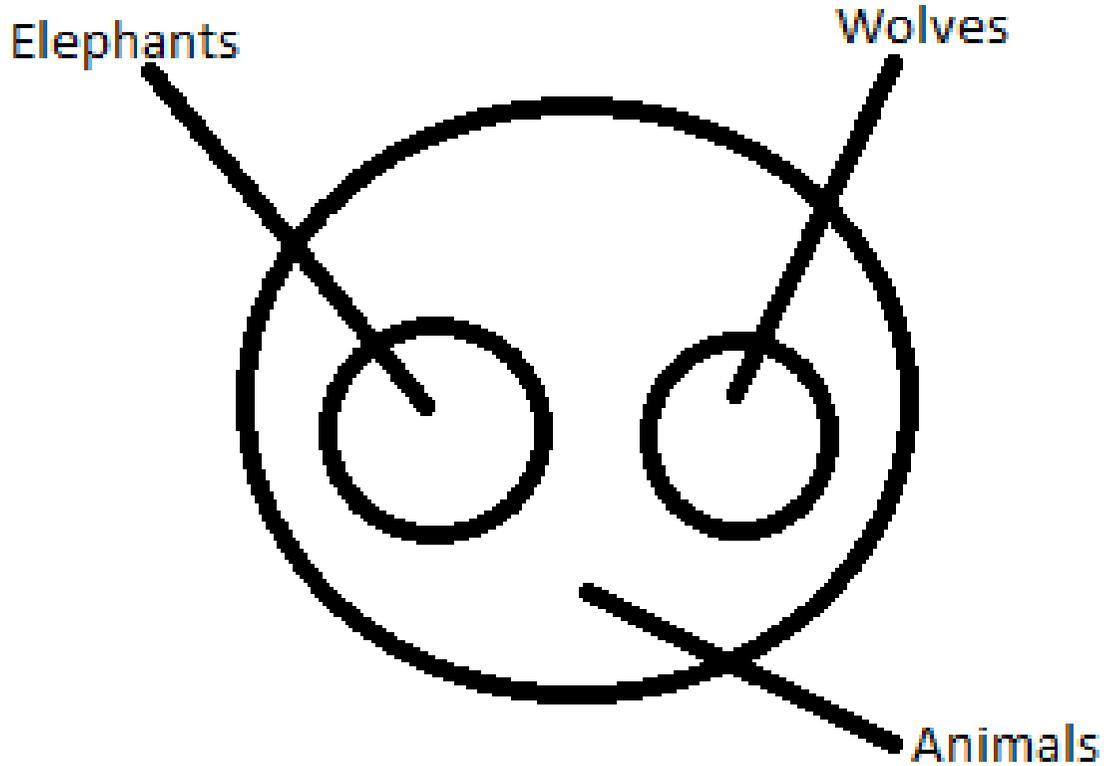
Q69 . Which of the following diagrams correctly represents Elephants, Wolves, Animals?



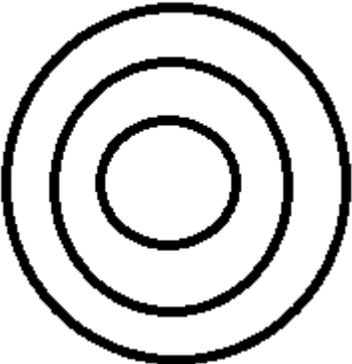
Answer: Option A

Explanation:

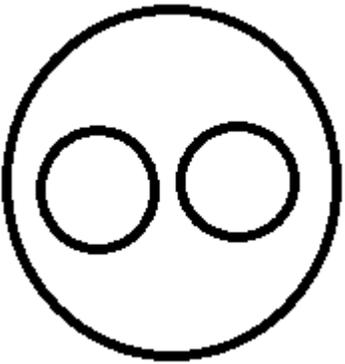
Elephants and Wolves bear no relationship to each other. But, both of them are animals.



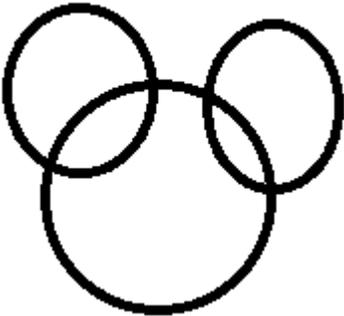
**Q70. Which one of the following Venn diagrams correctly illustrates the relationship among the classes: Carrot, Food, Vegetable?**



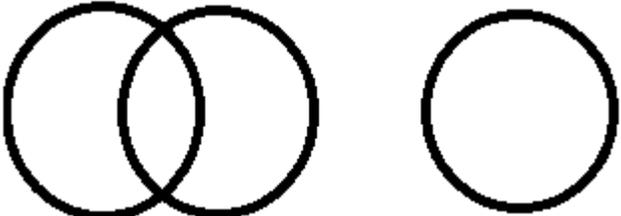
• A.



• B.



• C.

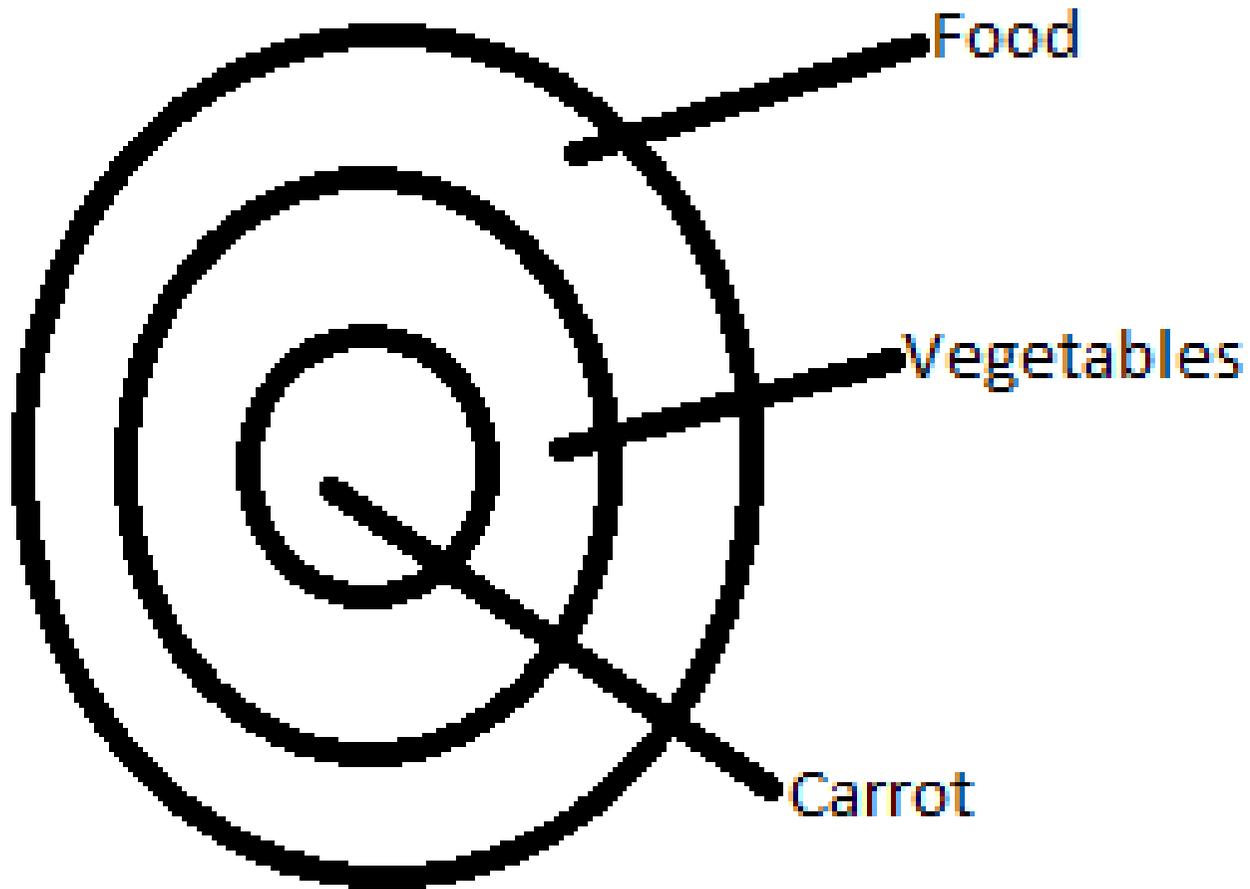


• D.

Answer: Option A

Explanation:

All carrots are vegetables. All vegetables are foods.



## PROBLEMS ON AGES

### Problem Statement :

The total age of P and Q is 12 years more than the total age of Q and R.

R is how many year younger to P ?

### Solution :

From the given information, we have

$$P + Q = 12 + Q + R$$

When we rearrange the above equation, we get

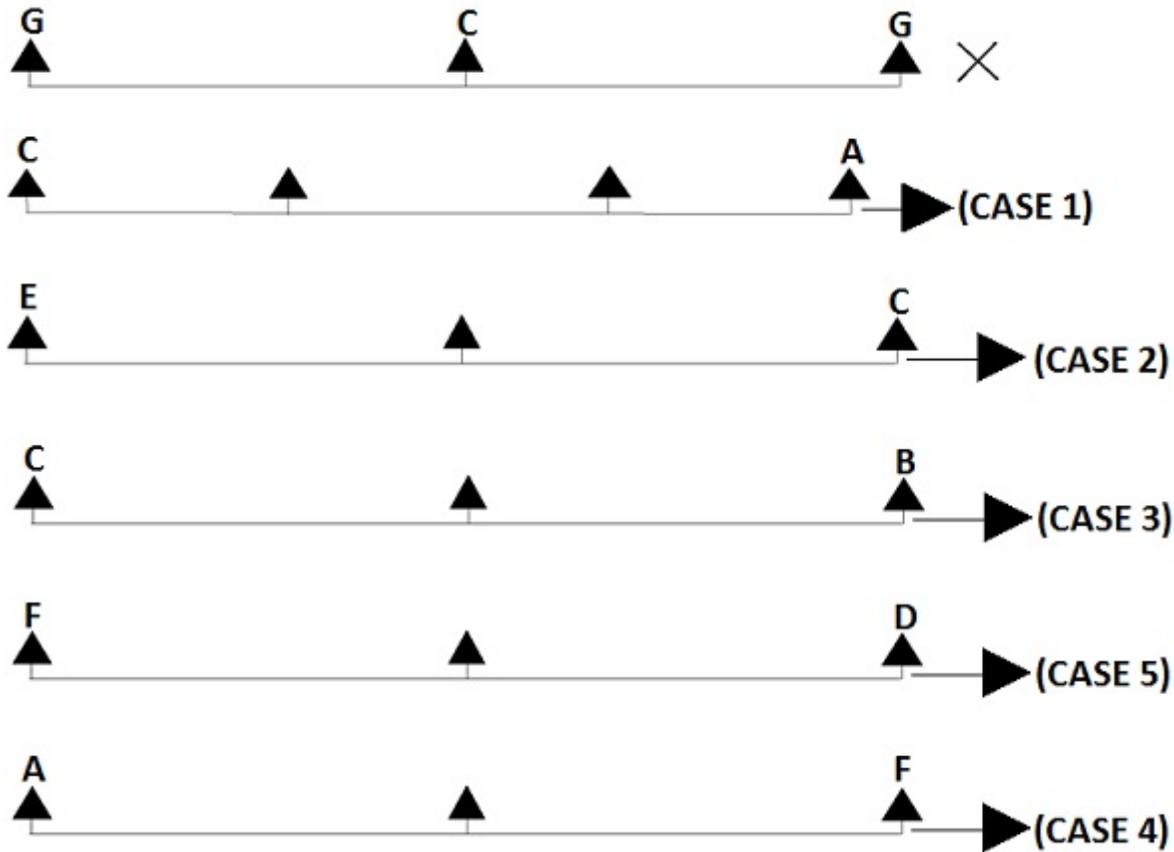
$$P - R = 12 + Q - Q$$

$$P - R = 12$$

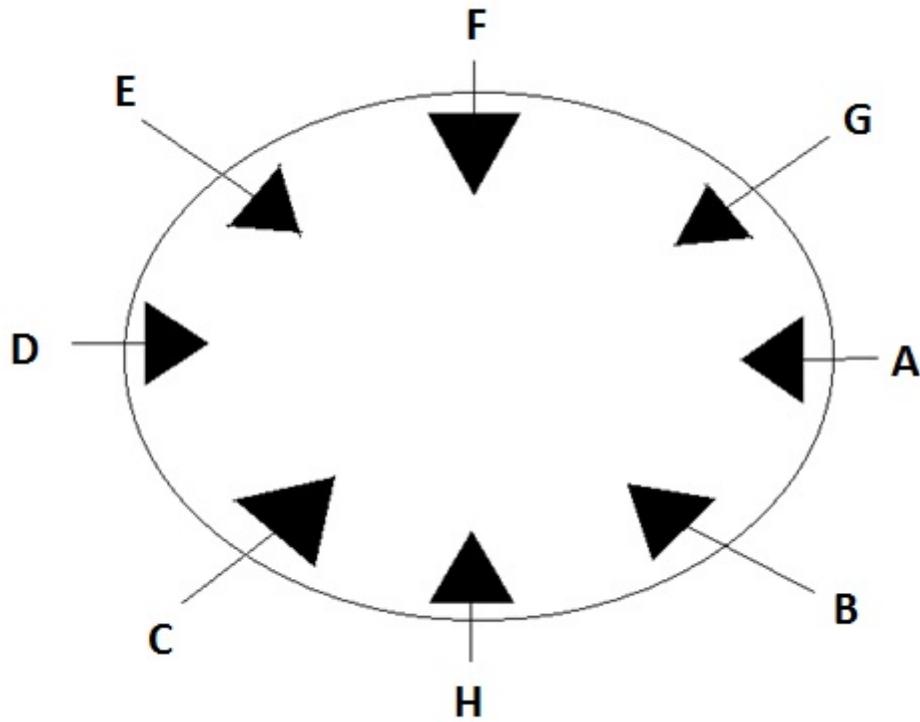
From the above equation, it is clear that R is 12 years younger to P.



# Explanation



By applying (CASE 1), (CASE 2), (CASE 3), (CASE 4) and (CASE 5), we get



By observing the diagram, we can clearly say that H is sitting to the immediate right of C.

**PROGRAMME CONTINUES.....**