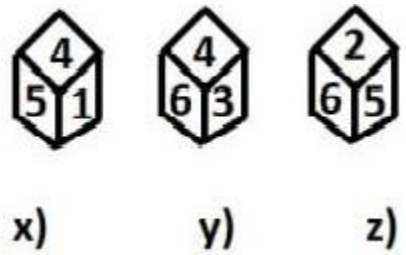
PUZZLES DICES AND VISUAL REASONING

1. **A dice with its face number 1 to 6 is shown in three different position, X,Y and Z. Find opposite faces.**



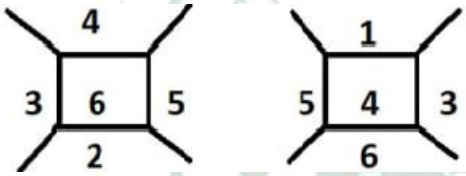
a. 6-1,4-2,3-5

b. 1-5,4-2,3-6

c. 6-1,4-3,2-5

d. 6-3,4-1,2-5

Ans: a

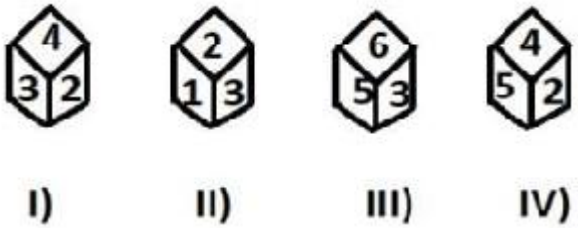


1 will be opposite to 6.

2 will be opposite to 4.

Opposite sides be 6-1,4-2,3-5.

2. **Which of the following is standard dice?**



a. I

b. II

c. III

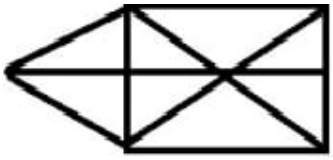
d. IV

Ans: II

I, III, IV – GENERAL DICE

II – STANDARD DICE

3. **How many triangles are present below?**



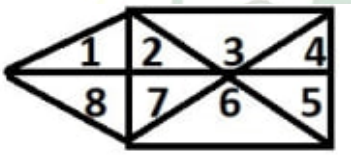
a. 16

b. 14

c. 15

d. 17

Ans: d



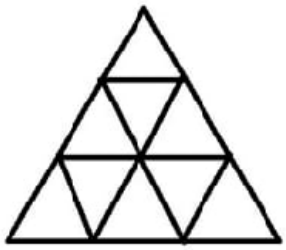
Triangle made of one digit = 8

Triangle made of two digits = (1,2)(8,7)(2,7)(1,8)(4,5) = 5

Triangle made of three digits = (4,5,6)(3,2,7)(2,7,6)(3,4,5) =4

Total triangles = 8+5+4 = 17

4. How many triangles are present below?



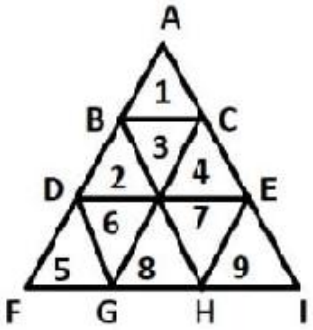
a. 12

b. 14

c. 15

d. 13

Ans: d

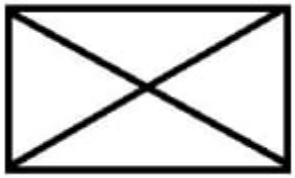


No of triangles = (1,2,3,4,5,6,7,8,9) = 9

= ΔADE, ΔFBH, ΔIGC, ΔAFI = 4

No of triangles = 9 + 4 = 13.

5. How many right-angle triangles are there in this figure?



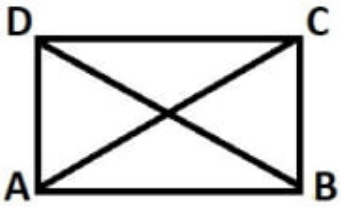
a. 6

b. 4

c. 7

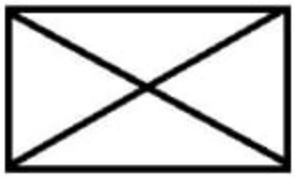
d. 8

Ans: b



Right angled triangles = ΔBCD, ΔDAC, ΔDAB, ΔABC = 4

6. How many triangles are present below?



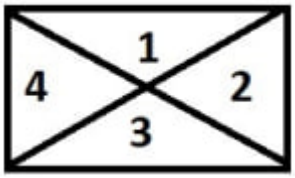
a. 4

b. 6

c. 8

d. 7

Ans: c

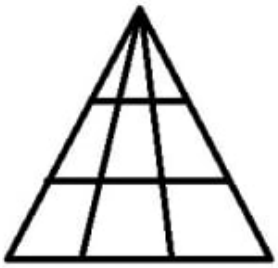


No. of triangle made of one digit = 4

No. of triangle made of one digit = (1,2)(2,3)(3,4)(1,4) = 4

Total triangles = 4 + 4 = 8

7. **How many triangles are present below?**



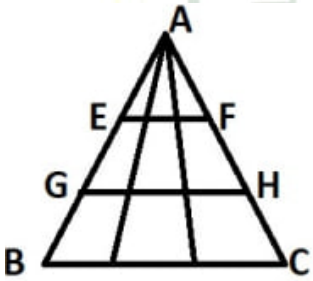
a. 26

b. 34

c. 21

d. 30

Ans: d



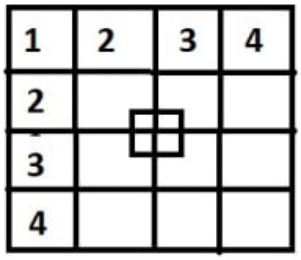
ΔAEF = 10

ΔAGH = 10

ΔABC = 10

Total triangles = 30

8. Count the number of squares in the figure.



a. 35

b.36

c. 38

d. 37

Ans: a

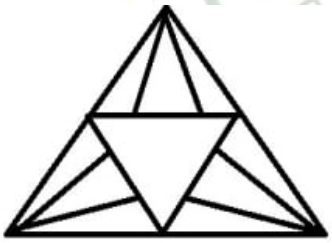
Format = $1^2 + 2^2 + 3^2 + 4^2$

= (4X4) + (3X3) + (2X2) + (1X1) + 5

= 16 + 9 +4 + 1 + 5

Total squares = 35

9. How many triangles are present below?



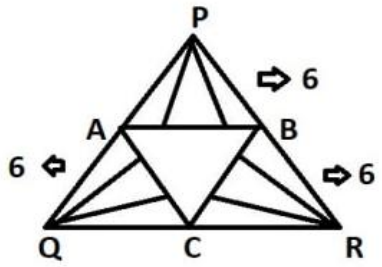
a. 20

b. 21

c. 22

d. 18

Ans: a

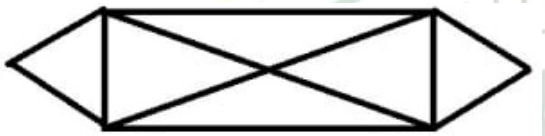


Total triangles = 6 + 6 + 6 + ΔABC + ΔPQR

= 6 + 6 + 6 + 1 + 1

= 20

10. Count the number of triangles in the figure.



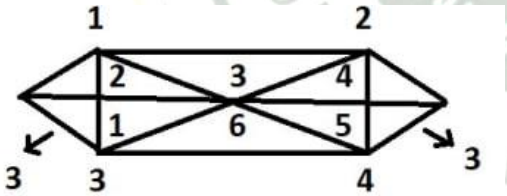
a. 20

b. 26

c. 24

d. 22

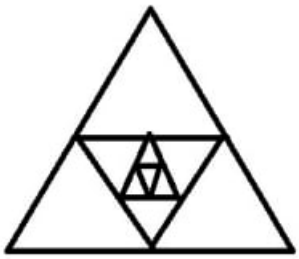
Ans: d



Total triangles = 3 +12 + 3 + 4

= 22 triangles.

11. Count the number of triangles in the figure.



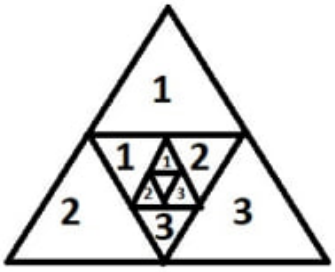
a. 12

b. 13

c. 14

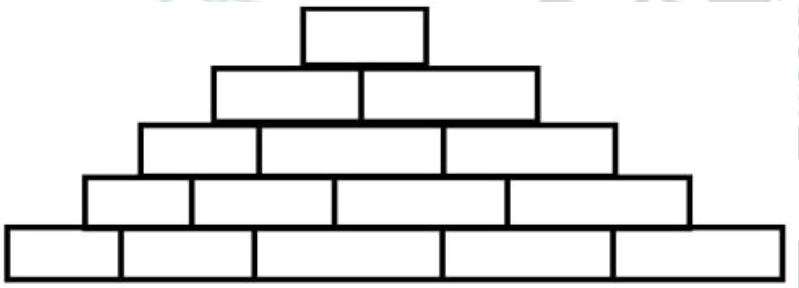
d. 15

Ans: b



Total triangles = 4+4+4+1 = 13

12. Count the number of squares in the figure.



a. 45

b. 55

c. 65

d. 35

Ans: b

$1^2 = 1$

$2^2 = 4$

$3^2 = 9$

$4^2 = 16$

$5^2 = 25$

Total squares = 1+4+9+16+25

= 55

13. Count the number of triangles in the figure.

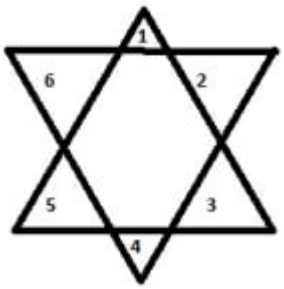
a. 6

b. 7

c. 8

d. 9

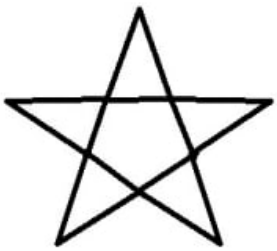
Ans: c



Total triangles = 6 + 2(big triangles)

= 8 triangles

14. Count the triangles in the picture.



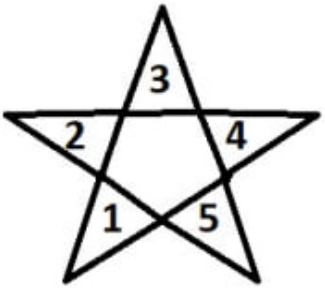
a. 12

b. 10

c. 9

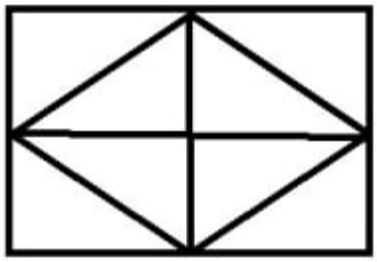
d. 11

Ans: b



5 + 5 = 10

15. How many triangles are present below?



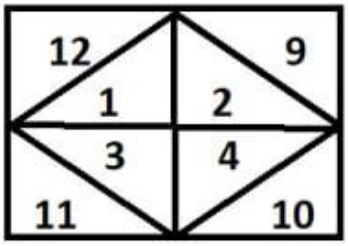
a. 14

b. 12

c. 13

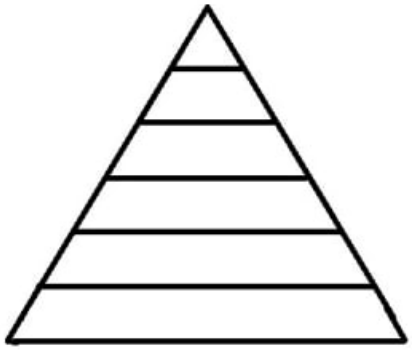
d. 15

Ans: b



Total triangles = (4 X 2)+ 4 = 12

16. How many triangles are present below?



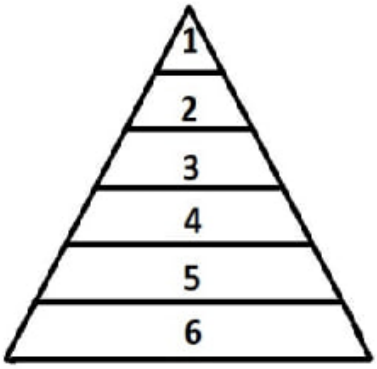
a. 6

b. 7

c. 8

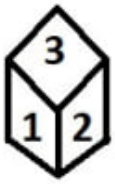
d. 12

Ans: a



So, there are 6 triangles present.

17. Find the opposite side of 5.



a. 2

b. 3

c. 1

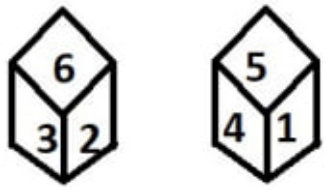
d. 4

Ans: a

It's a standard dice,so

Opposite of 5 = 7 – 5 = 2.

18. Find the opposite side of 6.



a. 1

b. 3

c. 2

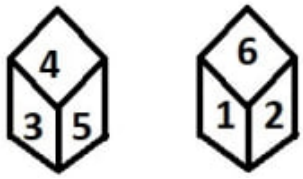
d. 5

Ans: a

It's a standard dice,so

Opposite side of 6 = 7- 6 = 1

19. Find the opposite of 4.



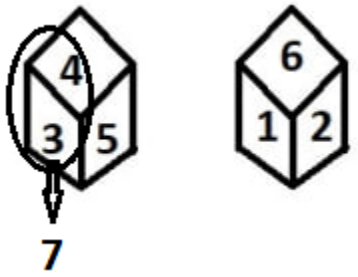
a. 6

b. 2

c. 1

d. 3

Ans: a



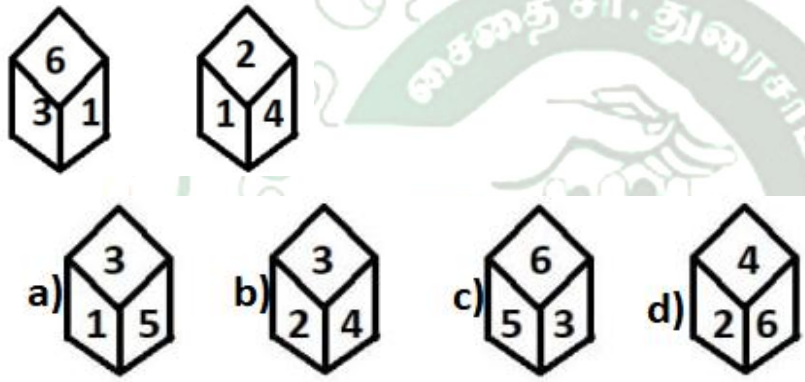
3 <-> 1

5 <-> 2

4 <-> 6

So, the opposite of 4 is 6.

20. Which one is correct with respect to the below figure?



Ans: c

Common number = 1

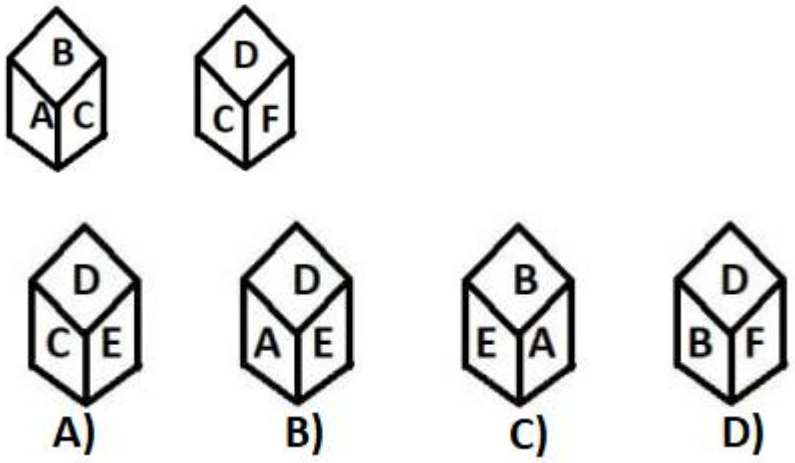
Opposite sides be,

3 <-> 2

6 <->4

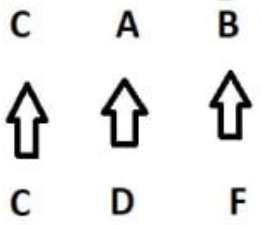
1 <->5

21. Which one is correct with respect to the below figure?



Ans:

Common term = c



Opposite sides be,

A <-> D

B <-> F

C <-> E

22. Find the opposite of 3.

a. 6

b. 1

c. 4

d. 2

Ans: a

Common term is 3.

Opposite to 3 is 6.

23. Find the opposite face of $?

a. %

b. ©

c. @

d. #

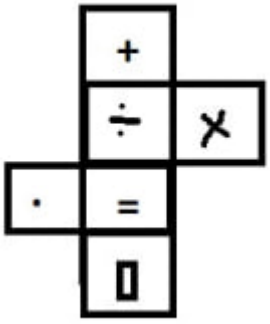
Ans: a

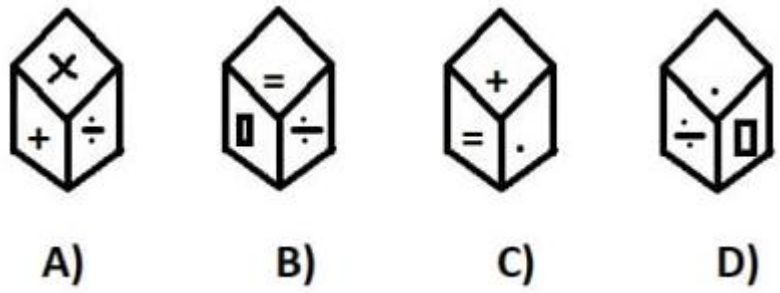
@ $

© %

$ <-> %

24. Which of the following is true?





Ans: a

+ <-> =

÷ <->

X <-> •

25. In a column of poles one pole is the sixth from either end of the column. How many poles are there in a column?

a. 13

b. 11

c. 14

d. 15

Ans: b

Total number of poles in a column = 6 + 6 – 1 = 11

26. If black means white, white means green, green means red, red means yellow and yellow means blue then what is the colour of tomato?

a. Black

b. Yellow

c. Blue

d. Green.

Ans: c

Black means white

White means Green

Green means Red

Red means yellow

Yellow means blue.

27. **Read the following information carefully and answer the questions given below.**

Raja, Kavita Velan, Priya and Anita are friends and good players. Raja and Kavita are good in hockey and volleyball. Velan and Raja are good in hockey and tennis. Priya and Kavita are good in cricket and volleyball. Velan Priya and anitha are good in football and tennis.

Q1. Who is good in hockey volleyball and cricket?

a.Rajan

b.Velan

c.Kavitha

d.priya

Q2. Who is good in tennis volleyball and hockey?

a.Rajan

b.Velan

c.Kavitha

d.priya

Q3. Who is good in tennis cricket volleyball and football?

a.Rajan

b.Velan

c.Kavitha

d.priya

28. Examine carefully the following statement and answer the three items that follows

Out of four friends, P, Q, R and S

- P and Q play football and cricket.
- Q and R play cricket and hockey.
- P and S play basketball and football.
- R and S play hockey and basket ball.

Q1. Who does not play hockey?

a. P

b. Q

c. R

d. S

Q2. Who play football, basketball and hockey?

a. P

b. Q

c. R

d. S

Q3. Which game Q, R and S play?

a. basketball

b. hockey

c. cricket

d. football

29. 49 students are there in class. Nithin gets 18th position from the start. What is the rank of Nithin from end?

a. 33

b. 32

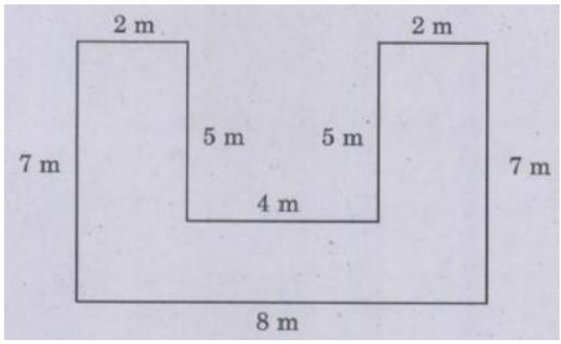
c. 30

d. 34

Ans: b

49 – 18 + 1 = 32

30. Find The Area of the Following Shapes?



A. 26 sq. m
B. 36 sq. m
C. 46 sq. m
D. 56 sq. m
Solution :
Area = l * b
Area of outer rectangale – Area of inner triangle
(8 * 7) – (5*4) = 56 – 20 = 36 sq. m

31. If 'HUMBLE' is given by the code EHLUBM. What does the code EDUCATION mean?
A. NEDOIUTCA
B. NEOIDUTCA
C. NEDUOITCA
D. NEODIUTCA
Solution :
HUMBLE → EHLUBM

EDUCATION → ?

H	U	M	B	L	E

E	H	L	U	B	M

E D U C A T I O N

N E O D I U T C A

Answer = NEODIUTCA

32. If "NOIDA" is written as 39658, how will "INDIA" be written?

A. 36568

B. 63568

C. 63569

D. 65368

Solution:

NOIDA = 39658

INDIA = ?

N = 3, O = 9, I = 6, D = 5, A = 8

INDIA = 63568

Answer = 63568

33. Find the unknown number?

20 13 07

30 08 22

40 ? 28

A. 10

B. 12

C. 16

D. 20

Solution :

20 13 07

30 08 22

40 ? 28

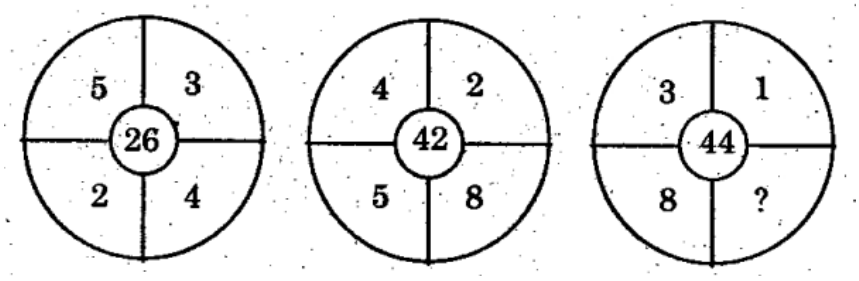
20 – 7 = 13

30 – 22 = 08

40 – 28 = 12

Ans = 12

34. Find the missing term



A. 12

B. 18

C. 16

D. 24

Solution:

(5 * 4) + (2 * 3) = 20 + 6 = 26

(4 * 8) + (5 * 2) = 32 + 10 = 42

(3 * x) + (8 * 1) = 44

3x + 8 = 44

3x = 44 – 8

3x = 36

X = 36/2

X = 12

Ans = 12

35. Find the odd man out in the following:

1, 144, 16, 25, 49, 81, 121, 36, 62

A. 1

B. 49

C. 121

D. 62

Solution:

Ans = 62

Because all other numbers are whole square numbers which is not a whole square number.

36. P, Q and R can fill the tank in 12, 16 and 24 min respectively. All three began to fill the tank together but P and Q left 3 and 4 min respectively before filling the tank. Find the total time taken by all of them to fill the tank?

A. 12 min

B. 16 min

C. 8 min

D. 10 min

Solution:

(x-3)/12 + (x-4)/16 + x/24 =1

(4x – 12 + 3x – 12 + 2x)/48 = 1

9x – 24 = 48

9x = 72

X = 8 min

37. Find the next number in the following series?

4, 6, 9, $13\frac{1}{2}$

A. $20\frac{1}{4}$

B. $22\frac{3}{4}$

C. 19

D. $17\frac{1}{2}$

Solution :

Find the nest term:

4, 6, 9, 131/2, ?

2 3 4.5 6.75

$13\frac{1}{2}$ + 6.75 = 13.5 + 6.75 = 20.25

Ans = $20\frac{1}{4}$

38. Raju starts walking towards south. After walking 20 m he turns towards north and walks 8 m. again he turns towards east and walks 5m. how far and in which direction is he from his starting point.

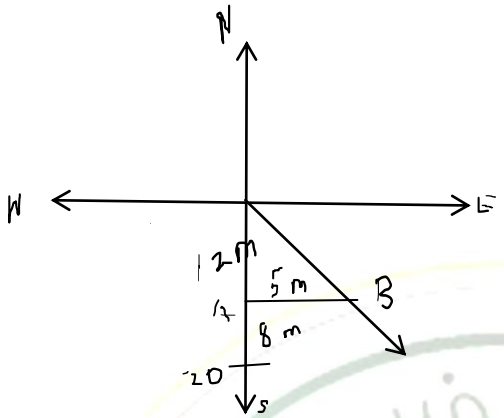
A. 15m, south

B. 17m, north-west

C. 7m,east

D. 13m, south-east

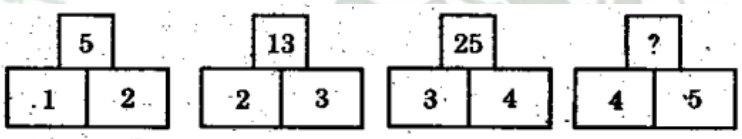
Solution:



$OB^2 = OA^2 + AB^2 = 12^2 + 5^2 = 144 + 25 = 169$

OB = 13m South-East

39. Find the missing number in the place?



A. 41
B. 35
C. 30
D. 28

Solution :

$1^2 + 2^2 = 1 + 4 = 5$

$2^2 + 3^2 = 4 + 9 = 13$

$3^2 + 4^2 = 9 + 16 = 25$

$4^2 + 5^2 = 16 + 25 = 41$

Ans = 41

40. If + means x, x means -, ÷ means + and - means ÷ then what is the value of (175 - 25) ÷ (5+20) ×(3+10)

A) 265

B)78

C)77

D)354

Solution :

(175-25)÷(5+20)×(3+10)=?

(175÷25)+(5×10)-(3×10)=?

7+100-30=7+70=77

Answer=77

41. Find out the wrong number in the series

190, 166, 145, 128, 112, 100, 91

A)100

B) 166

C) 145

D) 128

Solution:

190-166=24

166-145=21

145-128=17

128-112=16

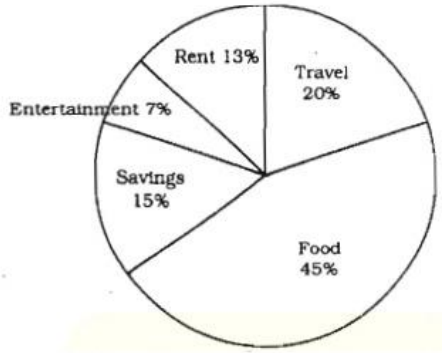
112-100=12

100-91=9

All the different is 3 except 128

If 128 is replaced with 127 all the difference will become as 3

42. A man earns Rs.28,000 as monthly salary His expenditure and saving are given in the diagram. How much did be spend on entertainment?



A) RS.1950

B) RS.1960

C) RS.1970

D) RS.1980

Solution:

Monthly income = 28000 rs

Entertainment = 7%

28000×7/100= 1960rs

Answer = 1960rs

43. G I V E 5137, B A T 9 2 4 then G A T E?

A) 2547

B) 5247

C) 5427

D) 5724

Solution:

G I V E B A T

5 1 3 7 9 2 4

G A T E

5 2 4 7

ANS = 5247

44. BMO, EOQ, HQS, _____?

A) LMN

B) SOV

C) SOW

D) KSU

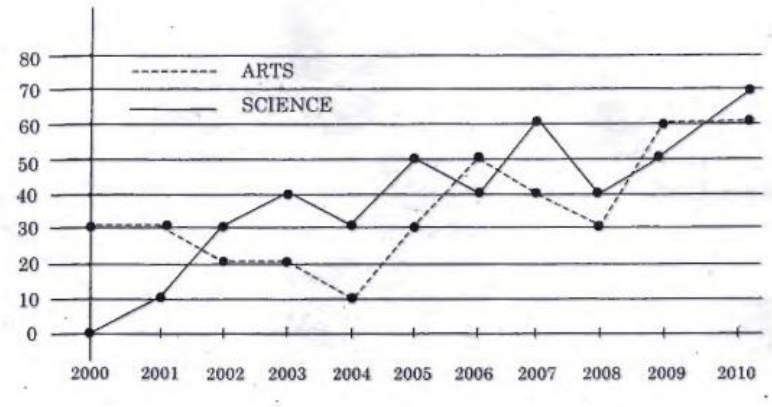
B → E → H → K
CD FG IJ

M → O → Q → S
N P R

O → Q → S → U
P R T

ANS = KSU

45. Sales by two category for ABC press 2000,2010 (in thousands of books)



In how many years did the sales of science books exceed the sales of arts books from 2000 to 2009?

A) 4 years

B) 5years

C) 6 years

D) 7 years

Solution:

Science book outsold art books in2002, 2003, 2004 2005, 2007, 2008

46. Five persons A, K, L, R and U are sitting around a circular table, K is immediate left to U and B is between A and U, then immediate. Neighbours of L are

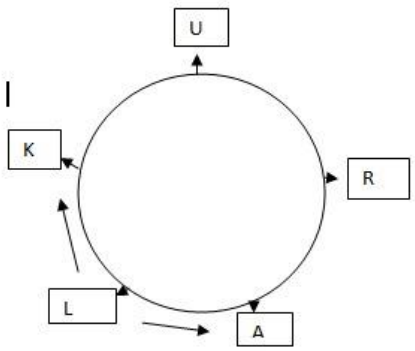
A) K and A

B) U and A

C) K and R

D) A and R

SOLUTION:

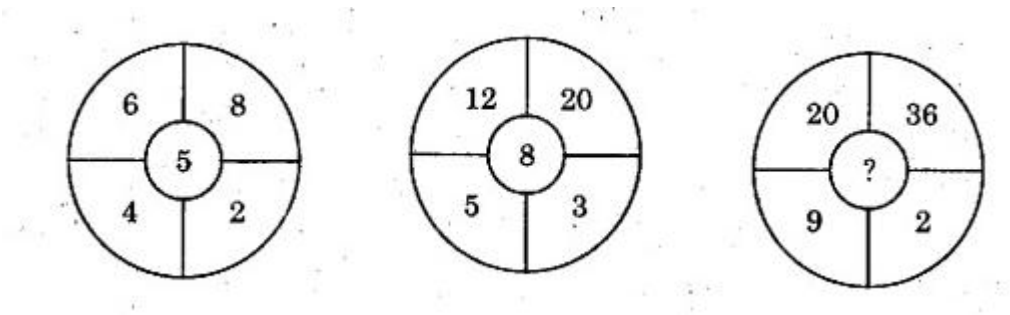


A,K,L,R,U are round

Near L are K and A

ANS : K and A

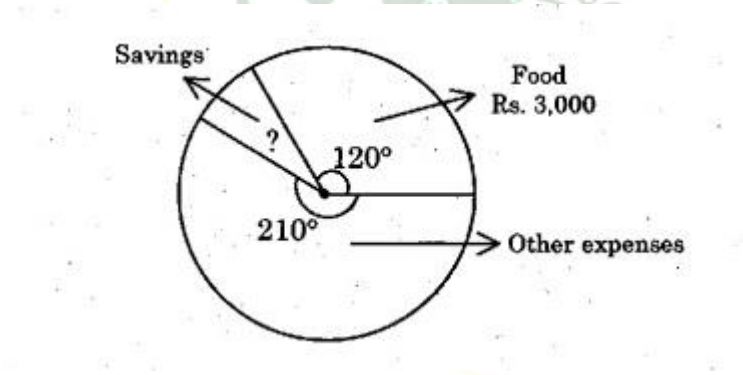
47. Find the missing number in the place?



A) 10
B) 11
C) 13
D) 14

Solution:
1St circle =>6/2 +8/4 = 3+2= 5
2nd circle => 12/3 +20/5 =4+4=8
3Rd circle=> 20/2 +36/9 =10+4= 14
Answer = 14

48. Monthly expenditure of a person is show in the figure. Find the amount has in his savings?



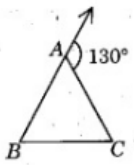
A) Rs.800
B) Rs.900
C) Rs.1,000
D) RS 750

Solution:

Total angle = 360° Q=360°-(120°+210°) = 360° - 330° 120° ->3000 30° ->?(x) (x)×120 = 30×3000 x= 30×3000/120 = 750rs (option d)

49. In the given figure,

$\angle B : \angle C = 2 : 3$. Find $\angle B$



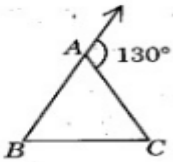
A) 120°

B) 52°

C) 78°

D) 130°

$\angle B : \angle C = 2 : 3$. Find $\angle B$



$\angle A$ = 180° - 130° = 50°

$\angle B : \angle C = 2:3$

$\angle B = 2X, \quad \angle C = 3X$

$\angle B = 2X$ = 2 * 26° = 52°

50° + 2x+3x = 180° 50° + 5x = 180°

5x=180° -50°=130°

50. Five distinct items A, B, C, D and E are placed in distinct boxes numbered as 1, 2, 3, 4, 5. Items B and E cannot be grouped together. Maximum number of boxes can be left out without items is

A) 1

B) 2

C) 3

D) 0

51. Find out the wrong number in the sequence. 623, 251, 543, 356

A) 543

B) 251

C) 623

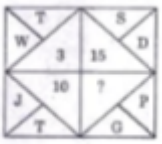
D) 356

Solution:

121, 264, 312, 462, 583 121/11 = 11, 264/11 = 24, 462/11 == 42, 583/11=53

Answer = 356

52. What will come in the place of a question mark?



A) 9

B) 6

C) 7

D) 3

W – T = 3

(23-20=3)

S-D = 15

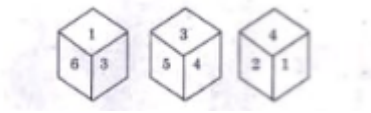
(19-4=15)

J-T=10

(20-10=10)

G-P=? 16-7 =9 Answer= 9 (option A)

53. Three positions of the same die are given. Find the number opposite to the side represented by 2.



A) 5

B) 3

C) 6

D) 1

Check options:

4,1 Never comes because it is near
May be 3, 5 6
5 , 6 is in one place
So answer is 3

54. If 7 is related to 56 then 10 is related to

A) 74

B) 64

C) 50

D) 90

7is related 56 10 is related to = ?

7×6= 56 consecutive numbers – 7,8 10× 11 = 110 - × 10×9 = 90

Answer= 90 (option d)

55. If 5 + 3 = 34 and 6 + 2 = 40 then, the value of 7 + 1 is

A. 54
B. 34
C. 50
D. 30

Solution :

$5 + 3 = 5^2 + 3^2 = 25 + 9 = 34$

$6 + 2 = 6^2 + 2^2 = 36 + 4 = 40$

$7 + 1 = 7^2 + 1^2 = 49 + 1 = 50$

Ans = 50

56. Find the missing number in the following:

4242, 4254, 4230, 4266, 4218, 4278, _____

A)4264

B) 4272

C) 4228

D) 4206

Solution :

4242, 4254, 4230, 4266, 4218, 4278, _____? Split in to 2 series

4242,4230,4218, ___? = decreased by 12

4254,4266,4278 ___? = increased by 12 4218 – 12 = 4206 (option d)

57. Find out the odd number in the series given 25, 36, 49, 81, 121, 169, 225

A) 36

B) 49

C) 169

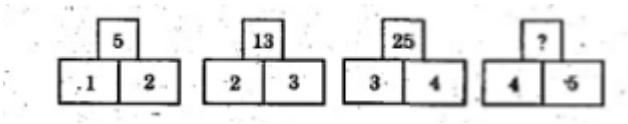
D) 225

Solution:

25,36,49,81,121,169,225

6(2) square of even number others are square of odd number answer= 36 (options)

58. Find the missing number in the place "?"



A) 41

B) 35

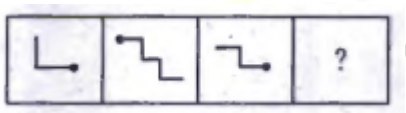
C) 30

D) 28

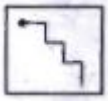
Solution:

$1^2 + 2^2 = 1 + 4 = 5$
$2^2 + 3^2 = 4 + 9 = 13$
$3^2 + 4^2 = 9 + 16 = 25$
$4^2 + 5^2 = 16 + 25 = 41$
Ans = 41

59. Find the missing block.



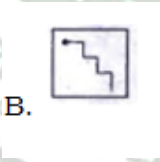
A.

B. 

C.

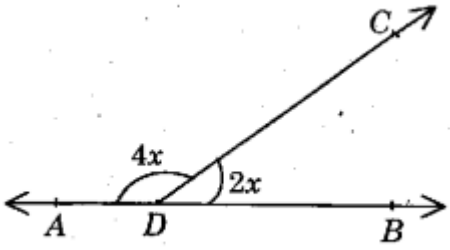
D.

Solution:



Extra one line added

60. From the fig find the value of x



A. 30°

B. 60°

C. 90°

D. 45°

Solution:

$4X+2X=180^0$

$6X=180^0$

$X=180^0/6$

$X=30°$