

# N M Dedhia Kutchi Talent Scholarship Exam [KTSE] – 2010 SET A

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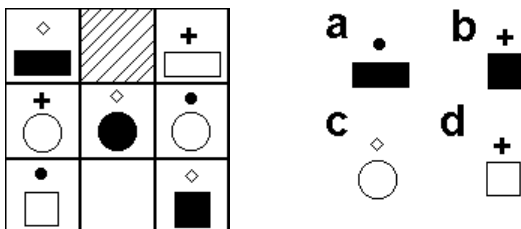
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## Instructions

- The exam duration is **100 minutes ( 1 hour and 40 minutes)**
- The exam is of 100 marks
- There are **78 questions** in two sections for a total of 100 marks
  - SECTION 1: **1 marks** each (60 questions adding up to **60** marks)
  - SECTION 2: **2 marks** each (20 questions adding upto **40** marks)
  - There is NO negative marking
- The rough work should be done on separate paper provided.
- Most questions are multiple choice. **With a pencil, fill the correct answer in the answer sheet separately provided.**
- Since some students might see visual questions for the first time, here is an example of a visual question

Example of Visual question: Fill in the white square with the figure that most logically fits in from the four figures (a,b,c,d)



Answer:

The correct answer is **(d)** since each row has a diamond, plus sign and dark circle on top of each figure. The blank square should have a plus sign on top of it. Also, each row has two white and one dark figures. The blank square should have a white figure. Hence the white square with the plus on top of it is the correct answer

**ALL THE BEST !!**

# SECTION 1

ALL QUESTIONS IN THIS SECTION ARE OF 1 MARK

**Q1:** (1 mark) How much time is there between 21:47 today and 13:43 day after tomorrow?

A: 38:03      B: 25:56      C: 39:56      D: 28:34      E: 24:00

**Q2:** (1 mark) What is 50% of 10% of 25% of 40% of 60% of 2000?

A: 9      B: 8      C: 7      D: 5      E: 6

**Q3:** (1 mark) A tri-cyclist goes for a 1000 km tour. He has two spare tires. He wants to use each tyre for the same distance and changes tyres accordingly. How many km did each tyre travel ?

A: 500      B: 600      C: 333      D: 500      E: 1000

**Q4:** (1 mark) A jigsaw puzzle contains 50 pieces. If joining any two pieces is considered one move, what is the least number of moves required to join all 50 pieces?

A: 24      B: 51      C: 25      D: 50      E: 49

**Q5:** (1 mark) A man is born on February 29, 1944, and was 55 in 2000. How many birthdays did he have till March 2000?

A: 13      B: 14      C: 15      D: 16      E: 54

**Q6:** (1 mark) A weighing scale is balanced with three packets of rice on one side and a packet of rice plus five bars of silver of 99 percent purity each weighing 100 gms on the other side. What is the weight of each rice packet?

A: 250      B: 300      C: 247.5      D: 245      E: 297.5

**Q7:** (1 mark) There are twenty sparrows on the branch of a tree. A hunter shoots three sparrows with a single burst of fire. How many sparrows are now there on the branch?

A: 3      B: 17      C: 16      D: 0      E: 4

**Q8:** (1 mark) During your shopping you buy three things. The apple costs twice as much as an orange and the orange costs twice as much as a banana. You spend a total of Rs. 14. How much did you pay for the orange?

A: 2      B: 3      C: 4      D: 5      E: 6

**Q9:** (1 mark) In a certain box of chocolates, the number of white chocolates is 25 percent of the number of the other chocolates in the box. What percentage are the white chocolates of all the chocolates in the box?

A: 20%      B: 15%      C: 25%      D: 30%      E: 75%

**Q10:** (1 mark) What is the missing number in the following sequence?

84      12      2       $\frac{2}{5}$        $\frac{1}{10}$       ?

A:  $\frac{1}{20}$       B:  $\frac{1}{30}$       C:  $\frac{1}{50}$       D:  $\frac{1}{15}$       E:  $\frac{1}{25}$

**Q11:** (1 mark) In a class with fewer than 30 students, two received a B on a math test.  $\frac{1}{7}$  of the class received a C,  $\frac{1}{2}$  received a D and  $\frac{1}{4}$  of the class failed the exam. How many students received an A?

- A: 5                      B: 4                      C: 3                      D: 1                      E: 2

**Q12:** (1 mark) The perimeter of a square has a value that is two-thirds of the number representing its square footage. What is the size of each side of the square?

- A: 4                      B: 6                      C: 8                      D: 10                      E: 12

**Q13:** (1 mark) How many times in a 12 hour period are the hands of a clock directly opposite each other?

- A: 10                      B: 11                      C: 12                      D: 6                      E: 0

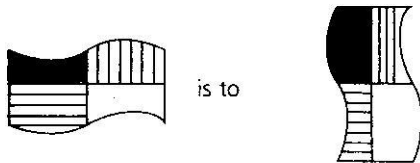
**Q14:** (1 mark) A pipe can fill a swimming pool in three hours. A second pipe can fill the pool in two hours. If both pipes are turned on at the same time, how long will it take them to fill the pool?

- A: 5 hours              B: 150 minutes              C: 80 minutes              D: 60 minutes              E: 72 minutes

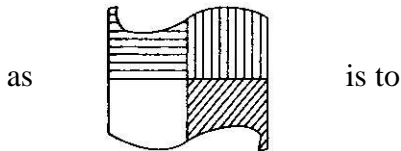
**Q15:** (1 mark) A mixture of chemicals costs \$40 per ton. It is composed of one type of chemical that costs \$48 per ton and another type of chemical that costs \$36 per ton. In what ratio were the two chemicals mixed?

- A: 1:2                      B: 1:3                      C: 1:4                      D: 1:1.5                      E: 2:3

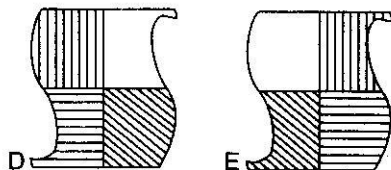
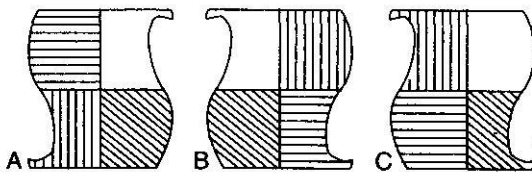
**Q16:** (1 mark)



is to



is to



as

- A: A                      B: B                      C: C                      D: D                      E: E

**Q17:** (1 mark) What number should replace the question mark?

1, 30, 8, 24, 15, 18, 22, ?

- A: 12                      B: 24                      C: 16                      D: 23                      E: 10

**Q18:** (1 mark) Which number should replace the question mark?

9	3	2	1
24	2	6	6
21	3	4	3
18	3	4	2
20	5	1	?

A: 2                      B: 3                      C: 4                      D: 5                      E: 6

**Q19:** (1 mark) What letter should replace the question mark?

A	I	M	U	Y	G
C	G	O	S	?	E
A: A	B: B	C: C	D: D	E: E	

**Q20:** (1 mark) My watch showed the correct time at 12 noon, but then the battery started to run down until it eventually stopped completely. Between 12 noon and when it stopped, it lost 20 minutes per hour on average. It now shows 6 pm, but it stopped 4 hours ago. What is the correct time now?

A: 9 pm                      B: 10 pm                      C: 11 pm                      D: 12 midnight                      E: 1 am

**Q21:** (1 mark) Ali is half as old as Jigar, who is half as old again as Siddharth. Their combined ages total 189. How old is Jigar?

A: 38                      B: 36                      C: 46                      D: 54                      E: 32

**Q22:** (1 mark) An investor places  $\frac{3}{8}$  of his money in bonds that give 5% interest and the remainder in bonds that give 6%. If his annual return on the bonds is 180, how much was invested in the 6% bond?

A: 1500                      B: 2000                      C: 2400                      D: 2600                      E: 1800

**Q23:** (1 mark) A man and his son are going along a village road. The father is four times his son's age. But in 30 years, the father will be double his son's age. What is the present age of the father?

A: 30                      B: 40                      C: 48                      D: 60                      E: 44

**Q24:** (1 mark) If I had one more sister, then my number of sisters would be twice that of brothers. If I had one more brother, then I would have equal number of brothers and sisters. How many sisters do I have?

A: 0                      B: 1                      C: 2                      D: 3                      E: 5

**Q25:** (1 mark) Sulabh is younger than Arun and older than Manoj. Dharam is younger than Rohit and older than Rahul. Rohit is younger than Manoj and older than Amit. Amit is younger than Rahul and older than Sunil. Arun is younger than Ashok and older than Vinod, Vinod is older than Sulabh. Who is the youngest.?

A: Manoj                      B: Rahul                      C: Sunil                      D: Vinod                      E: Dharam

**Q26:** (1 mark) A If 3 cats can kill 3 rats in 3 minutes, then how long will it take 100 cats to kill 100 rats?

A: 33.3 minutes      B: 3 minutes      C: 300 minutes      D: 16.67 minutes      E: 1 minute

**Q27:** (1 mark) A man challenged his neighbor for a game of chess everyday for an entire month consisting of 31 days. It was decided that whoever won after every match would get Rs. 2 from the loser and the entire money won would be paid at the end of the month. At the end of the month, the neighbor paid the man a balance amount of Rs. 38. He had won 5 matches. How many matches ended in draw?

A: 2      B: 3      C: 4      D: 5      E: 8

**Q28:** (1 mark) Introducing a lady to her friend, Reshma said, "Her father-in-law's father's only son's, only daughter's brother, is grandfather to my daughter." How is the woman related to Reshma?

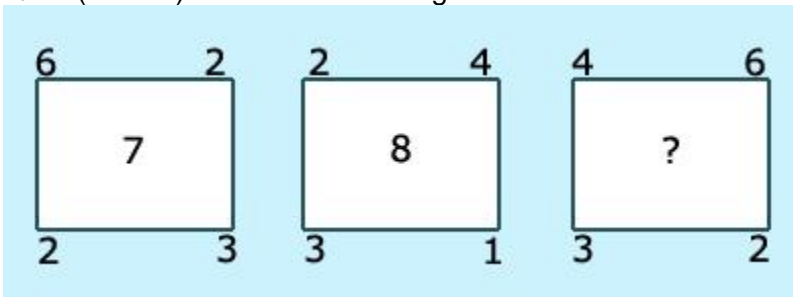
Note: My daughter's father's grandfather had only one son and one daughter.?

A: sister      B: mother-in-law      C: aunt      D: daughter      E: sister-in-law

**Q29:** (1 mark) A frog is laboring hard to climb up the marshy wall of a deep well. He manages to climb 3 yards during day, and while resting at night slips back 2 yards. How many days will he take to complete his task of climbing 30 yards?

A: 26      B: 28      C: 30      D: 31      E: none of the above

**Q30:** (1 mark) What is the missing number ?



A: 6      B: 8      C: 9      D: 10      E: 11

**Q31:** (1 mark) A farmer has 30 animals consisting of chickens and cows. The animals have 74 legs in total. How many cows does the farmer have ?

A: 1      B: 7      C: 12      D: 18      E: 21

**Q32:** (1 mark) John has an examination a day after tomorrow. Although he intended to start his preparations five days before the examinations, he could start with it just two days before yesterday. If today is Saturday, when did he expect to start his preparations?

A: Tuesday      B: Wednesday      C: Thursday      D: Friday      E: Monday

**Q33:** (1 mark) What comes next in the sequence?

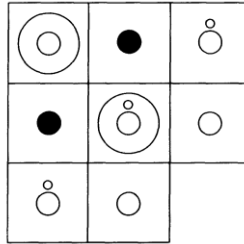
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A: 0      B: 1      C: 2      D: 3      E: 4

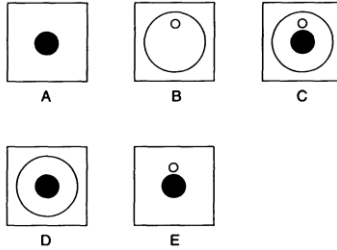
**Q34:** (1 mark) If you wrote down all the numbers from 1 to 100, how many times will you write 3?

A: 18      B: 19      C: 20      D: 21      E: 22

**Q35:** (1 mark)

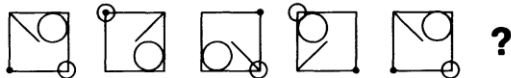


Which is the missing square?

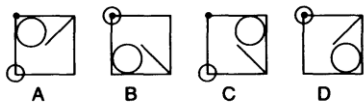


A: A      B: B      C: C      D: D      E: E

**Q36:** (1 mark)



What comes next?



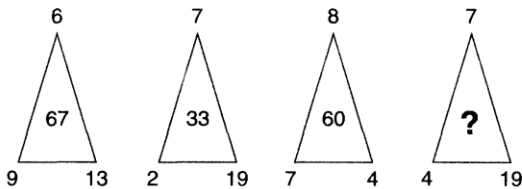
A: A      B: B      C: C      D: D      E: none of the above

**Q37:** (1 mark) Which of these calculations do not equal 100 ?

- A  $47\frac{9}{16} + 52\frac{7}{16}$
- B  $12^2 - 70 + (2 \times 13)$
- C  $3^2 + 4^2 + 5^2 + 6^2 + 64 - 56$
- D  $100 \times \frac{13}{17} \div \frac{26}{34}$

A: A      B: B      C: C      D: D      E: none of them equal 100

**Q38:** (1 mark) What number should replace the question mark ?



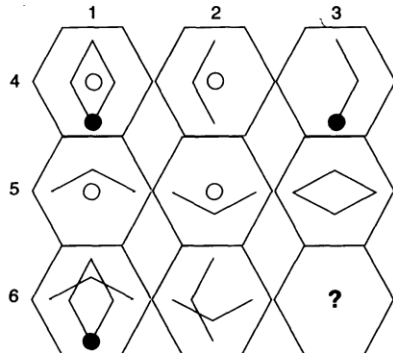
A: 47      B: 70      C: 38      D: 28      E: 60

**Q39:** (1 mark) Which letter is three to the right of the letter that is immediately to the left of the letter that comes midway between the letter immediately to the left of the letter H and the letter two places to the left of the letter C?

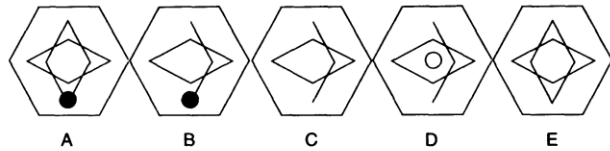
**A B C D E F G H**

A: B      B: C      C: F      D: G      E: H

**Q40:** (1 mark)



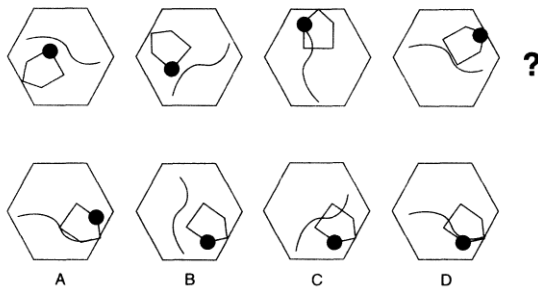
Which hexagon should replace the question mark?



A: A      B: B      C: C      D: D      E: E

**Q41:** (1 mark)

Which hexagon replaces the question mark?



A: A      B: B      C: C      D: D      E: E

**Q42:** (1 mark) The first five batsmen - A, B, C, D and E - averaged 40 runs each. D scored 12. A was the highest scorer. B and D scored 28 between them. C and E scored 72 between them. C scored ten more than E. D scored four fewer than B. B, C and D scored 69 between them. How many runs did A score?

A: 16

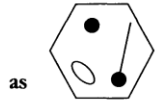
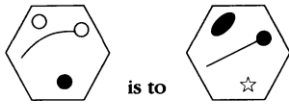
B: 41

C: 12

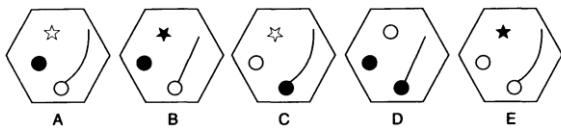
D: 90

E: 100

**Q43:** (1 mark)



is to



A: A

B: B

C: C

D: D

E: E

**Q44:** (1 mark) Which word does NOT belong with the others?

a. tire b. steering wheel c. engine d. car e. axle

A: Tire

B: Steering Wheel

C: Engine

D: Car

E: Axle

**Q45:** (1 mark) A Which word does NOT belong with the others?

a. aorta b. heart c. liver d. stomach e. intestine

A: Aorta

B: Heart

C: Liver

D: Stomach

E: Intestine

**Q46:** (1 mark) Exercise is to gym as eating is to

a. food. b. dieting. c. fitness. d. restaurant. e. plate ?

A: Food

B: Dieting

C: Fitness

D: Restaurant

E: Plate

**Q47:** (1 mark) A shop made sales of Rs. 6500 in April. In May, the amount made decreased by 10%. In June, the amount made increased 20% over May. How much money was made in June?

A: 6500

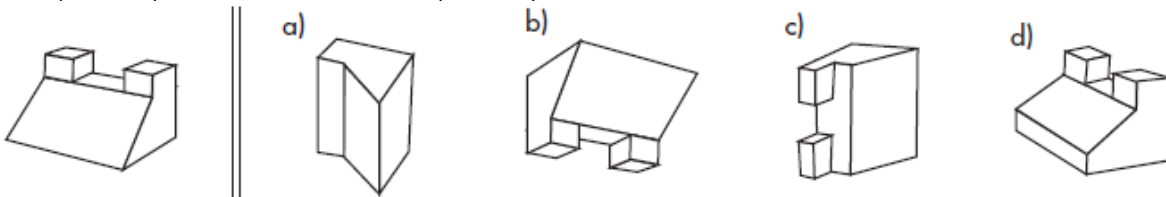
B: 7500

C: 8000

D: 7020

E: None of the above

**Q48:** (1 mark) Which of the blocks (a,b,c,d) is the same as the first block?



A: A

B: B

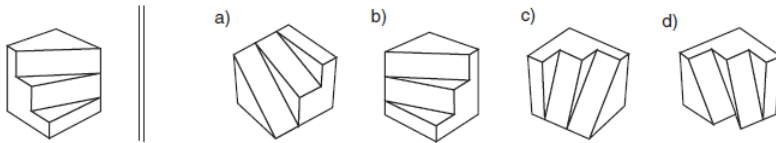
C: C

D: D

E: None of the above

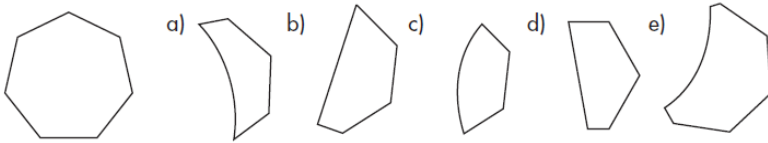
**Q49:** (1 mark) Which of the blocks (a,b,c,d) is the same as the first block?





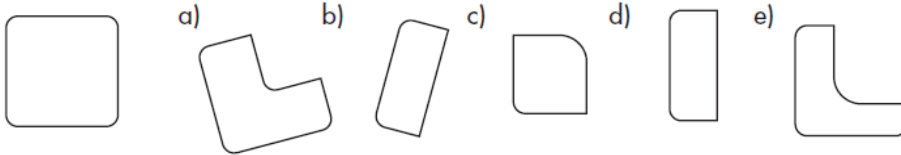
A: A      B: B      C: C      D: D      E: E

**Q50:** (1 mark) Pick the TWO answer choices that will come together to make the first figure shown. Pieces may be flipped and/or rotated?



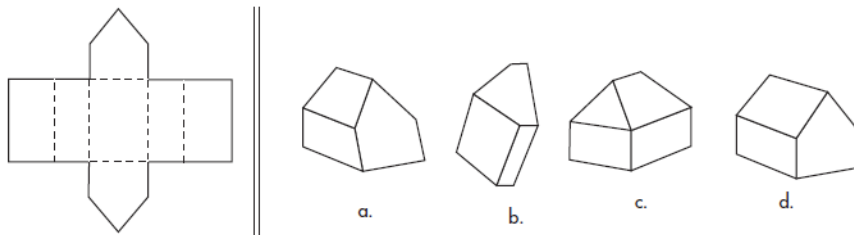
A: a+e      B: b+e      C: a+b      D: a+d      E: c+e

**Q51:** (1 mark) Pick the TWO answer choices that will come together to make the first figure shown. Pieces may be flipped and/or rotated.?



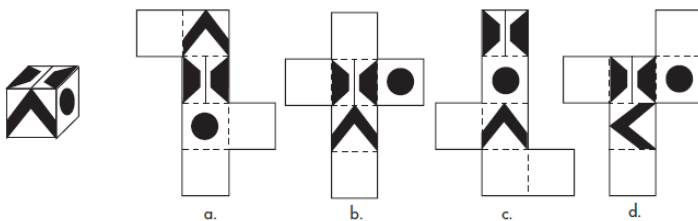
A: a+c      B: b+e      C: b+c      D: c+e      E: a+d

**Q52:** (1 mark) If you fold along the dotted lines, what shape will you get?



A: a      B: b      C: c      D: d      E: none of the above

**Q53:** (1 mark) If you open up the cube, how will it look?



A: a      B: b      C: c      D: d      E: none of the above

**Q54:** (1 mark) A large family consists of seven sons and each of them had one sister. Totally how many brothers and sisters are there?

A: 11      B: 12      C: 14      D: 7      E: 8

**Q55:** (1 mark) A cube has each side as 2 inches x 2 inches. How many cuts are needed (horizontal or vertical) so that the sum total of the surface area of the pieces is twice the original surface area of the cube?

- A: 2      B: 3      C: 4      D: 5      E: 6

**Q56:** (1 mark) A supervisor originally scheduled a construction job for 12 workers, allowing eight days for completion. Due to an emergency at another site, he pulled four workers off the construction job. If the remaining workers work at the same rate, how many days should it take them to complete construction?

- A: 8 days      B: 9 days      C: 10 days      D: 11 days      E: 12 days

**Q57:** (1 mark) What number should replace the question mark?

3	6	3	9	4	?	6
7	4	2	5	4	8	1

- A: 2      B: 3      C: 8      D: 9      E: 10

**Q58:** (1 mark) What number comes next ?



- A: 12 1/2      B: 14 3/4      C: 14      D: 12 3/4      E: 13 1/4

**Q59:** (1 mark) If today is Sunday, what day of the week will it be 4400 days from today?

- A: Monday      B: Tuesday      C: Wednesday      D: Thursday      E: Friday

**Q60:** (1 mark) Mr. Singh is raking the leaves in his lawn. He heaps up 22 big piles of leaves in the front yard, and 39 in the backyard. If he puts them all together, how many piles will he have?

- A: 1      B: 22      C: 39      D: 61      E: 17

# SECTION 2

ALL QUESTIONS IN THIS SECTION ARE OF 2 MARKS

**Q61:** (2 marks) In the multiplication given below, Q,R, and S represent different digits. What is the sum of Q,R and S?

$$\begin{array}{r}
 \text{RQ} \\
 \times \quad 7 \\
 \hline
 \text{SQQ}
 \end{array}$$

- A: 15      B: 18      C: 20      D: 24      E: 26

**Q62:** (2 marks) A man goes for a sponsored walk. On the first day, he covers one third of the total distance. On the second day, he covers one half of the remaining distance. On the third day, he covers one-third of the remaining distance. On the fourth day, he covers one-quarter of the remaining distance. He still has twenty-five kilometers to go. How much distance has he travelled so far ?

- A: 180      B: 120      C: 100      D: 125      E: 150

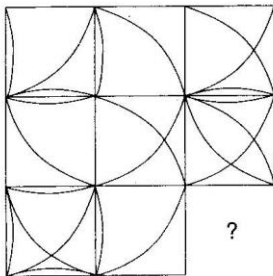
**Q63:** (2 marks) Take a full size paper. Fold the paper once, a second time, then one more time in any way you like thus folding it thrice. Then make just one straight scissor cut across the folded sheet in any way you like. What is the maximum number of pieces you can get?

- A: 3      B: 9      C: 4      D: 8      E: 6

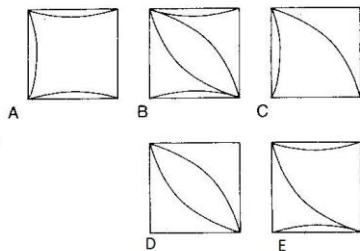
**Q64:** (2 marks) What are the chances of flipping a coin four times and getting at least 2 tails?

- A: 1/4      B: 13/16      C: 11/16      D: 1/2      E: 1

**Q65:** (2 marks)



Which option below should replace the question mark?



- A: A      B: B      C: C      D: D      E: E

**Q66:** (2 marks) Find the time between 7 and 8 when the hands of the clock are exactly opposite each other?

A: 5 + 8/15 minutes past 7  
 D: 5 + 10/11 minutes past 7

B: 5 + 3/4 minutes past 7  
 E: 5 + 18/19 minutes past 7

C: 7 minutes past 7

**Q67:** (2 marks) A chess tournament was organized in a round-robin format. Each player had to play all the other participants in the tournament once. At the end of the tournament it was seen that a total of 120 matches were played. How many players participated in the tournament??

A: 12      B: 13      C: 16      D: 18      E: 20

**Q68:** (2 marks) Out of the 70 employees working with ABC Ltd., 30 are females. Also, 30 employees received a promotion

24 employees are above 30 years of age

19, amongst the promoted employees are over 30 years, of which 7 are males

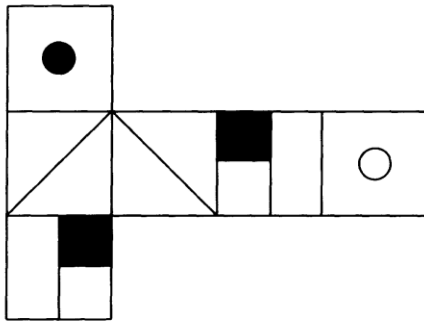
12 males are above 30 years of age

15 males have received a promotion

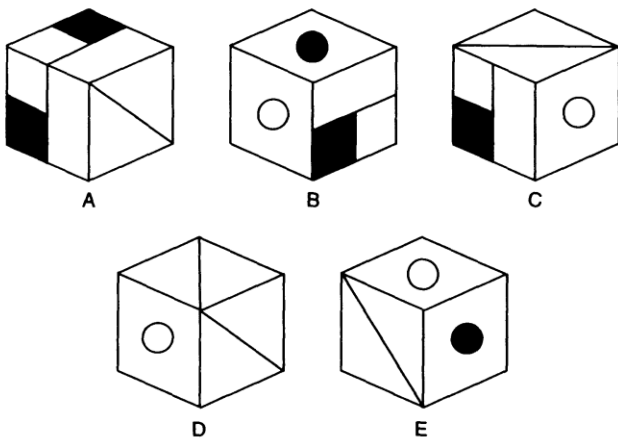
How many un-promoted females are there who are older than 30 years?

A: 0      B: 6      C: 7      D: 8      E: 9

**Q69:** (2 marks)



When the above is folded to form a cube, just one of the following can be produced. Which one?

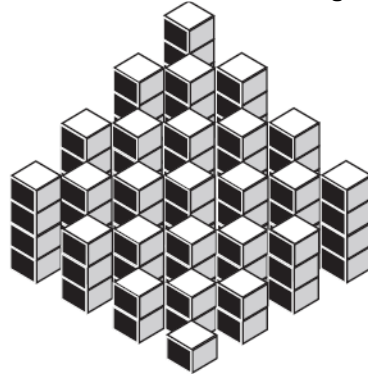


A: A      B: B      C: C      D: D      E: E

**Q70:** (2 marks) I take a certain journey and, due to heavy traffic, travel the first half of the complete distance at a speed of just 10 km.p.h. How fast would I have to travel over the second half of the journey to bring my average speed for the whole journey to 20 km.p.h.?

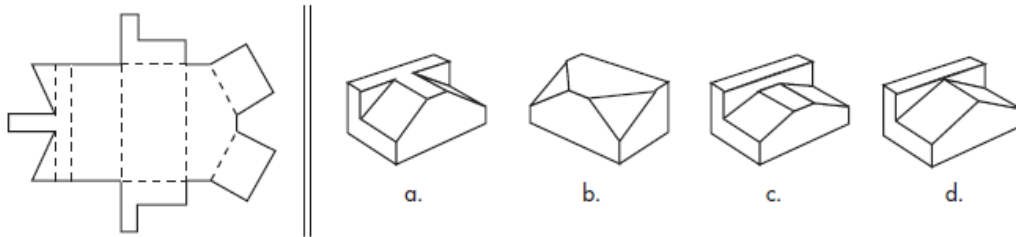
A: 20 kmph      B: 30kmph      C: 40 kmph      D: 50 kmph      E: It is impossible

**Q71:** (2 marks) How many blocks are there in the following?



- A: 80      B: 84      C: 88      D: 96      E: 100

**Q72:** (2 marks) If you fold along the dotted lines, what shape will you get?



- A: a      B: b      C: c      D: d      E: e

**Q73:** (2 marks) The nation of Zox consists of five islands, Zog, Zod, Zob, Zop and Zoz. The total population of all five islands is 750 Zoxians.

- The smallest island has  $\frac{1}{10}$  as many Zoxians as all of Zox
- The largest island is Zod. The smallest island is not Zoz
- One island has  $\frac{1}{5}$  of the total population of Zox. Another island has  $\frac{1}{3}$  of total Zox
- Zob is one and a half times larger than the other islands
- Zop has 100 more people than the smallest island

What is the population of Zog?

- A: 75      B: 100      C: 150      D: 250      E: 175

**Q74:** (2 marks) Four people (including Jenny and Alex) made the statements below. The married couple told the truth while the two single people lied.

Shorter man said I am not married to Rita

Taller man said I am not Geoff

Shorter woman said Geoff is the shorter man

Taller woman said The taller man is married to the shorter woman.

Which of the following is True?

- A: Shorter man is married to taller woman      B: Taller man is married to shorter woman  
 C: The taller man is married to taller woman      D: The shorter man is married to shorter woman  
 E: It is impossible to tell

**Q75:** (2 marks) A man has 53 coloured socks out of which 18 are identical blue socks, 27 are identical red socks and 8 are identical brown socks. The lights have failed and he is completely in the dark. How many socks must he take out of the drawer to be 100% certain that he has at least one pair of each colour?

A: 12          B: 6          C: 47          D: 53          E: 18

**Q76:** (2 marks) Robert has been to Africa five times in five different years (1983, 1987, 1992, 1996, and 1999). In each case, he visited a different country with a different person.

- Robert visited Africa with a professor in 1992
- He and his son visited Nigeria together
- It was in an odd-numbered year that he traveled with a business colleague
- Robert travelled to Egypt during an even numbered year
- He visited Kenya sometime before he visited Zaire
- Robert travelled with his best friend sometime in the 1980's
- He visited Morocco exactly four years after travelling with his wife

Which country did he visit along with his wife

A: Morocco    B: Kenya    C: Egypt    D: Nigeria    E: Zaire

**Q77:** (2 marks)

ALK = 8

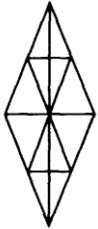
SNT = 5

MOE = 8

TIC = ?

A: 2          B: 3          C: 4          D: 5          E: 6

**Q78:** (2 marks) How many triangles are there in the figure below?



A: 34          B: 26          C: 20          D: 28          E: 30

**Q79:** (2 marks) Five murder suspects are being questioned. In their five statements, only three of them tell the truth. Who is the murderer?

Arthur says: 'Derek is the murderer.'

Bill says: 'I am innocent.'

Charlie says: 'It wasn't Edward.'

Derek says: 'Arthur is lying.'

Edward says, 'Bill is telling the truth.'?

A: Arthur    B: Bill    C: Charlie    D: Derek    E: Edward

**Q80:** (2 marks) A 6x6x6 cube is formed by gluing together 216 wooden blocks that are 1x1x1. If the cube is resting on a table, what is the maximum number of 1x1x1 blocks that you can see from any angle at one time (If you can see even one face of a 1x1x1 block, then count it)?

A: 24          B: 27          C: 81          D: 91          E: 125