

Section - II

General Instructions

Q. NO : 07 "A"

1. Give numbering to headings
2. Do not write lengthy paragraphs. Write medium sized paragraphs with headings.
3. Do not use table for comparison and contrast questions.

4. Draw figures/diagram/flowchart where needed.

5. Start new question from fresh page
6. Write unit of the answer in ability section.

7. Explain mathematical steps and the reasoning for better score.

8. Change colour scheme for references to give them more visibility.

9. Manage time well.

10. Wide page borders are discouraged.

Should be reasonable.

11. Avoid writing wrong references.

12. Give more weightage to expressly asked part/s of the question.

Data:

BROTHER is written as QDGSNQA
SISTER = ??

Solution :

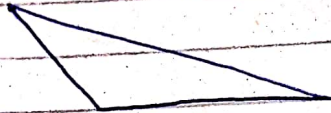
SISTER = QDSRHR

In this code, it is reverse order followed for each alphabet. It is one step backward of the given code starting from last letter (R) to the first (S).

Q: NO: 07 "C"

Scalene Triangle: A type of triangle whose all three sides ~~are~~ and angles are different is called scalene triangle.

Example:



Equilateral Triangle: A Triangle whose all three sides as well as angles are equal. (60°)

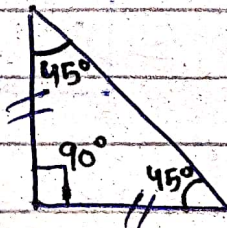
Example:



A triangle which is Isosceles and Right at the same time:

An Isosceles triangle is a triangle whose two sides and two angles are equal, and a Right angle triangle is the triangle whose one angle is 90° .

Example:



This is a triangle which is Isosceles and Right at the same time.

Q : NO : 07 "D"

Data :-

Pizza divided = 8 slices

Slices contain raisin = 3

Probability of Shiza picking a raisin slice = ?

Solution :-

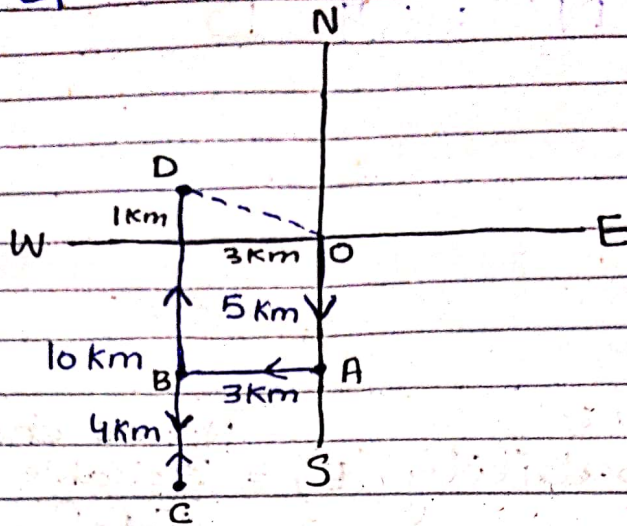
$$\text{Probability (E)} = \frac{\text{No. of chances of Probable event}}{\text{Total possible outcome}}$$

$$\text{Probability (Raisin Slice)} = \frac{3}{8}$$

The probability that Shiza will pick a slice with raisin is $\frac{3}{8}$

10

Q : No : 08 "A"



$$H^2 = P^2 + B^2$$

$$H^2 = (1)^2 + (3)^2$$

$$H^2 = 1 + 9 = 10 \text{ km}$$

$$H = \sqrt{10} = 3.16 \text{ km}$$

The man is 3.16 km away from his starting point

The man is in North-West direction of his starting point.

Q : No : 08 "B"

The first five prime numbers are:
2, 3, 5, 7, 11

The cubes of first five prime numbers are:

$$2^3 = 8$$

$$3^3 = 27$$

$$5^3 = 125$$

$$7^3 = 343$$

$$11^3 = 1331$$

The arithmetic mean of cubes of 1st five prime numbers is given by

$$= \frac{8 + 27 + 125 + 343 + 1331}{5}$$

$$= \frac{1834}{5} = \boxed{366.8} \text{ Answer.}$$

Q : No : 08 "C"

Data :

Men = 50

Construction = 20 km

Days = 40

Men = 70

Same length = 20 km

Days = ??

Solution :

Men	Length	Days
50	20	40
70	20	x

$$\frac{50}{70} \times \frac{20}{20} = \frac{x}{40}$$

$$\frac{5}{7} \times 40 = x$$

$$x = \frac{200}{7} = 28.57 \text{ days}$$

70 Men will construct same length of road in $\boxed{28.57 \text{ days}}$

Q : No : 08 "D"

Data :-

Property left = 1750,000 Rs

Debt = 150,000 Rs

Share of son = $2x$

daughter's share = $1x$

Solution :-

Property to be distributed =
 $= 1750,000 - 150,000 = 1600000$

Son's share

$$\frac{2}{3} \times 1600000 = 1066666.66 \text{ Rs}$$

Daughter's share

$$\frac{1}{3} \times 1600000 = 533333.33 \text{ Rs}$$