Section – II

Q.6(a)

Solution:

$$\overset{H\ T\ U}{a\ b\ c}$$

$$a+b+c = 15 \quad\text{———(A)}$$

According to the given condition

$$b+c = 12 \quad\text{———(1)}$$

and $\quad b-c = 2 \quad\text{———(2)}$

Add   eq(1) & eq(2)

$$b+c = 12$$
$$\underline{b-c = 2}$$
$$2b = 14$$
$$b = \frac{14}{2}$$
$$\boxed{b = 7}$$

put value of b in eq(1) to find c

$$7+c = 12$$
$$c = 12-7$$
$$\boxed{c = 5}$$

Now put $b=7$ & $c=5$ in eq(A)

$$a+7+5 = 15$$
$$a+12 = 15$$
$$a = 15-12$$
$$\boxed{a = 3}$$

So the three digit number is 375

Q6(b)

Given

Ratio of slices of small medium & large pizza =

$$2:3:4$$

weight of each slice = 40gm

Price of smaller pizza = 320 Ri.

There are 18 person and one slice person so No of slice is = 18 slices

Required

Price of total pizza = ?

weight of total pizza ?

Sol:

First find the number of slices in each pizza

Ratio is = 2:3:4

Sum of ratio = 2+3+4

$$= 9$$

So, slices in ~~Medium~~ small pizza $= \dfrac{2}{9} \times 18^{2}$

$$= 2 \times 2$$

$$= 4 \text{ slice}$$

Slices in medium pizza $= \dfrac{3}{9} \times 18^{2}$

$$= 3 \times 2$$

$$= 6 \text{ slice}$$

slice is large pizza $= \dfrac{4}{9} \times 18^{2}$

$$= 4 \times 2$$

$$= 8 \text{ slice}$$

As, The price of small pizza is 320

if means 4 slices = 320

1 slice = $\dfrac{320}{4}$

1 slice = 80 Rs

Now the price of total pizza meen

18 slice

18 slices = 80 × 18

18 slice = 1440 Rs

So price of total pizza is 1440 Rs.

Now find The total weight of pizza :

As given → one slice = 40 gm

So

18 slices = 40 × 18 gm

= 720 gm

So, The total weight of pizza is

Total weight = 720 gm

Section - II
Q-6(c)

Given:

Diameter $= d = 6\,cm$

Radius $= r = \dfrac{d}{2} = \dfrac{6}{2}\,cm$

$$\boxed{r = 3\,cm}$$

Required:

Circumference of circle $= S = ?$

Area of circle $= A = ?$

Solution:

The circumference of circle is

$$S = 2\pi r$$

$$= 2 \times 3.14 \times 3$$

$$= 6 \times 3.14$$

$$\boxed{S = 18.84\,cm}$$

and the area of circle is

$$A = \pi r^2$$

$$A = 3.14 \times 3^2$$

$$A = 3.14 \times 9$$

$$\boxed{A = 28.26\,cm^2}$$

Section II

Q6(d)

identify missing numbers.

i) 13, 24, 46, 90, 178, ____ .

ii) 5, 6, 9, 14, 21, ____ .

① 13, 24, 46, 90, 178, ____ .

In this series each term is obtained by multiplying the previous number with 2 and then subtract 2

So $178 \times 2 = 356$

and now subtract 2

So $356 - 2 = 354$

Thus, the missing number is 354

13, 24, 46, 90, 178, 354

② 5, 6, 9, 14, 21, ____ .

In the given series an increasing odd number is adding to previous term.

$5 + 1 = 6$

$6 + 3 = 9$

$9 + 5 = 14$

14 + 7 = 21

The next odd number is 9 so:

21 + 9 = 30

so the missing number is 30

5, 6, 9, 14, 21, 30

Q 8 (a)

Given:

length = l = 15 ft

width of room = w = 60% of length

Required:

Dimensions of room = ?

Sol:

Find width = w = 60% of length

$$= \frac{60 \times 15}{100}$$

$$= \frac{6 \times \overset{3}{15}}{\underset{2}{10}}$$

$$= \frac{\overset{3}{6} \times 3}{2}$$

$$= 3 \times 3$$

$$= 9 \, ft$$

So Dimensions are

length = l = 15 ft

width = w = 9 ft

Q 8(b)

N

W ←——————→ E

S

$x = ?$

20 ft

48 ft
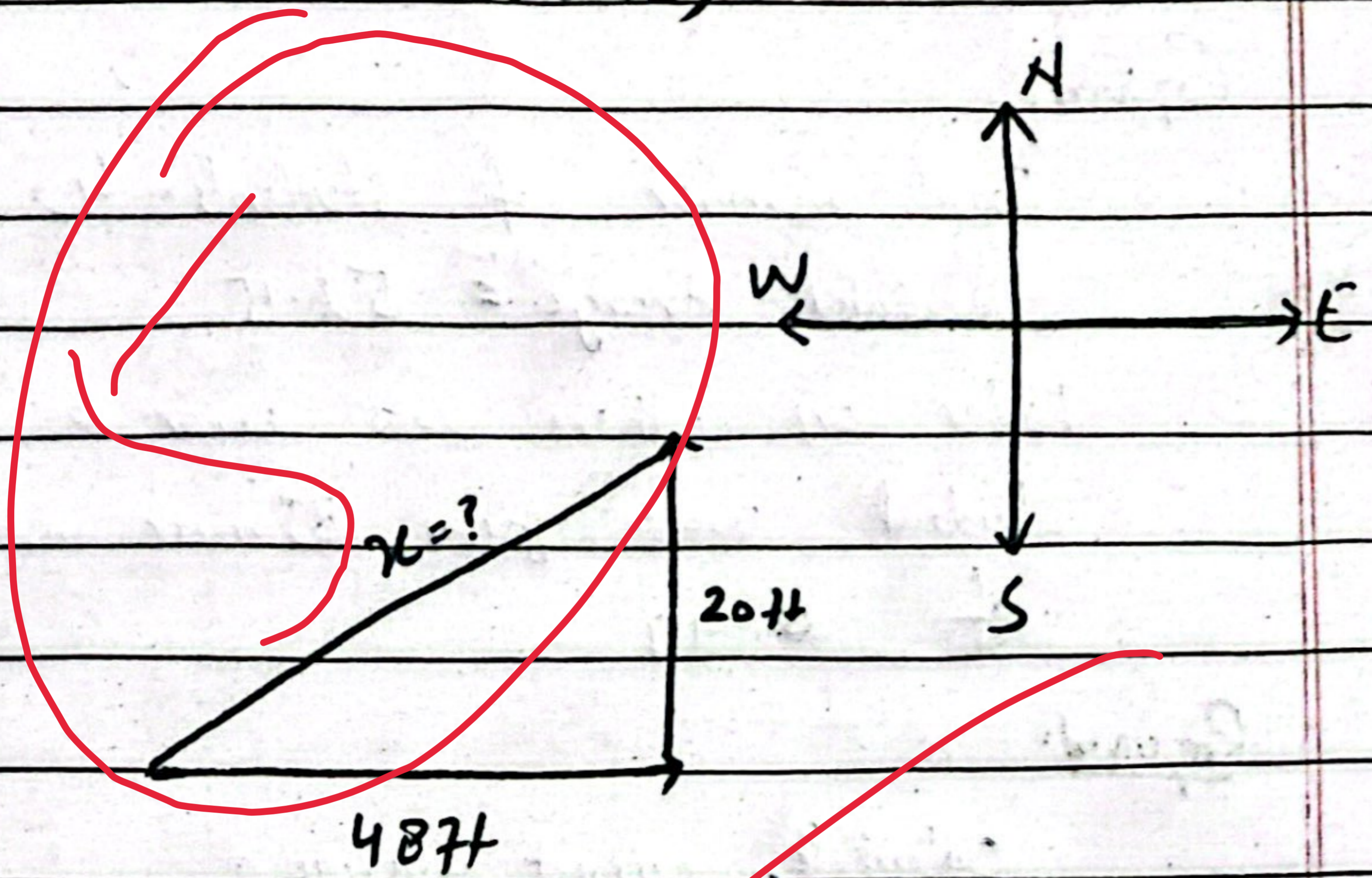
Use Pythagoras theorem to find the Hypotenous (straight line distance) . x = ?

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

$$x^2 = 48^2 + 20^2$$

$$x^2 = 2304 + 400$$

$$x^2 = 2704$$

take square root on b/s

$$\sqrt{x^2} = \sqrt{2704}$$

$$x = 52 \ ft$$

she would have to run 52 ft

Q8(L)

Given:

Total number of students = 40

Calculated Average$^{\text{marks}}$ = 52.15

later on there was error a student were given 85 mark instead of 49

Required:

Calculate, correct average :

Sol:

At first Average marks were.

$$\bar{X_1} = \frac{\text{total marks}}{\text{total number of student}}$$

$$\bar{X_1} \quad 52.15 = \frac{\text{total marks}}{40}$$

total marks = 52.15 × 40

total marks = 2086

As given there was mistake 85 mark were given instead of 49.

So, the difference is

difference = ~~49 = 85~~

$$= 85 - 49$$

$$= 36$$

It means 36 marks were added

extra in total mark so subtract it from total marks to find the correct average.

Total marks = 2086

After correction:

total marks = $2086 - 36$

$= 2050$

Now correct average is

$$\overline{X_2} = \frac{\text{total mark}}{\text{total No. of students}}$$

$$\overline{X_2} = \frac{2050}{40}$$

$$\boxed{\overline{X_2} = 51.25}$$

So, 51.52 is the average marks of the class.

Section I
Q 2 (a)

Lipids:

These are organic compound insoluble in water but soluble in organic compounds.

→ They are commonly known as oils and fats. They are ester of long chain of fatty acids and alcohol.

Types

Simple Lipids : → Also known as triglycerides.

They produce fatty acids and alcohol upon hydrolysis

Examples:

Fats, oils, waxes.

Complex Lipids:

Those lipids which produces fatty acids, alcohol and some other substances upon

hydrolyss are known as complex Lipids

Examples:

Phospholipids, glycolipids etc.

Function.

① Simple lipids or triglycerides serves as reserve energy of the body

② They serves as a source for fat soluble vitamins like A,D,E and K

③ protect vital organs like heart and kidney

④ Layer of fat provide insulation and protection from cold.

Q2 (b)

Measure for energy conservation and Sustainable use:

① ↑ Efficient appliance:
Energy
People should use those appliances which

less amount of energy and whose output is comparable to the input they take.

② Renewable source:

People should opt renewable energy sources like solar and wind as they are available in abundant amount.
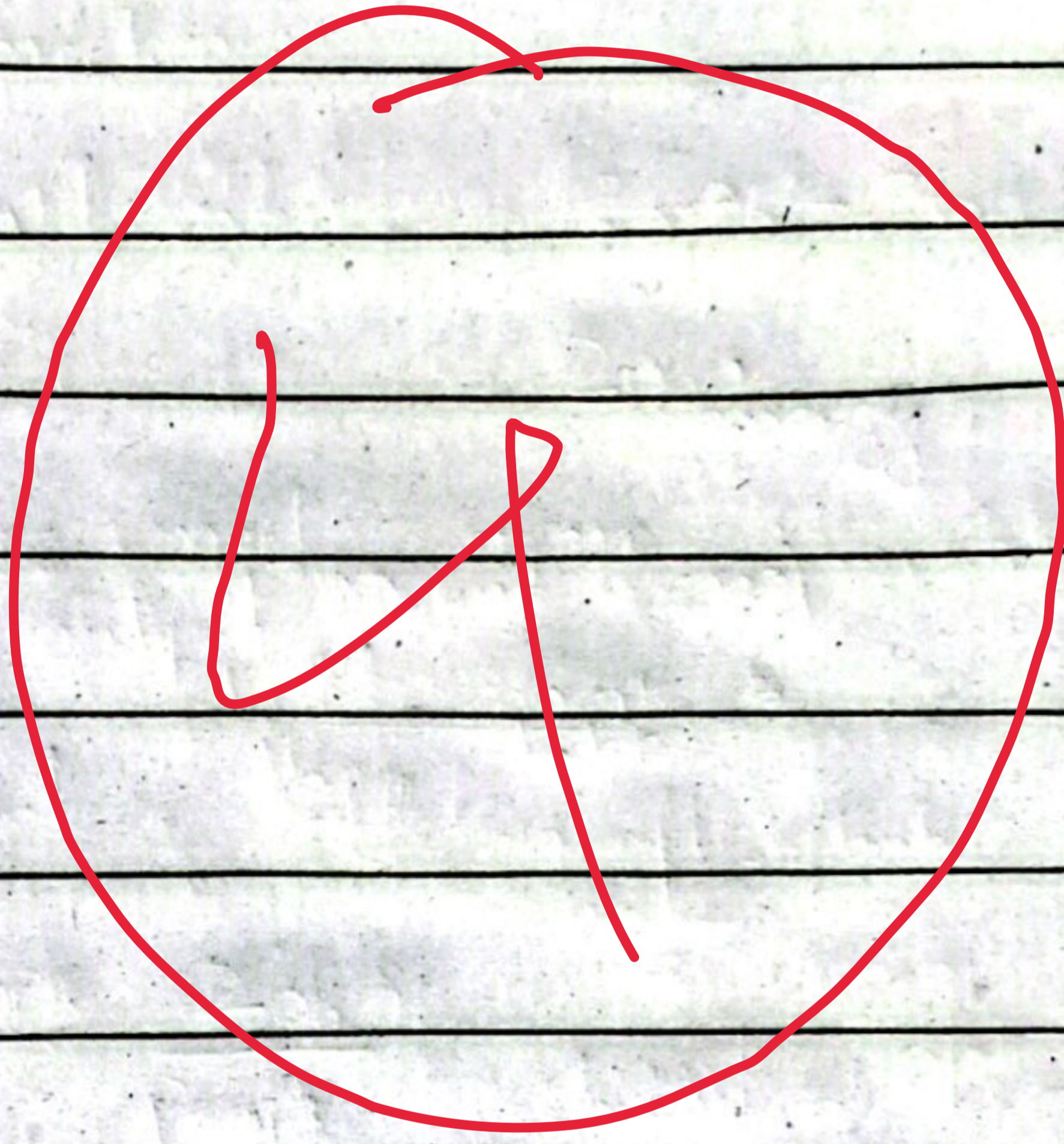
③ Promote public transportation:

Use of public transport should be promoted. It will ~~contin~~ save energy use by the individual in his own private transport.

④ Electric Vehicles:

Electric vehicles should be introduced instead of ~~Fuel~~ vehicle running on fuel. It will also save the environment & save energy

5) **Public Awareness:**

Public Awareness Compaigns should be launched to educate individual about the energy saving practices.