

Q a)

Answer

Structure and function of human ear

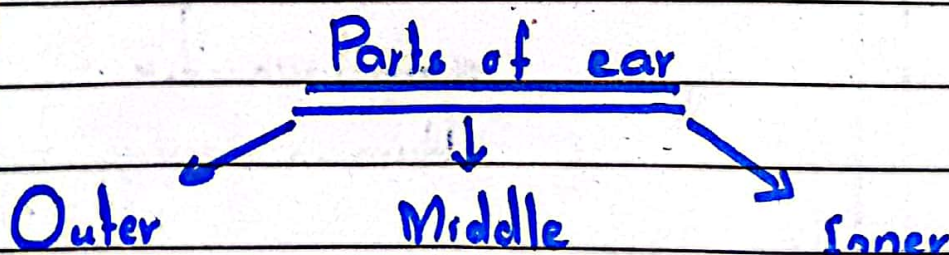
1- Human ear

"Human ear is a hearing organ of human body."

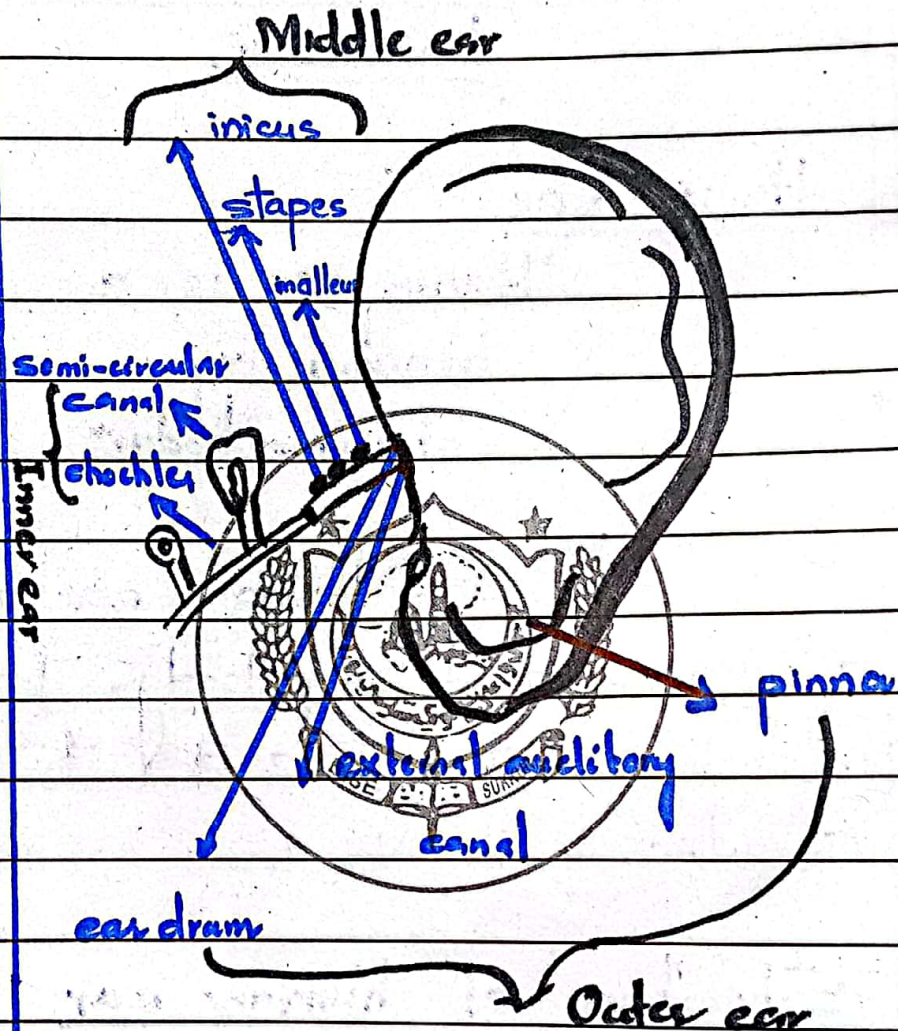
Human ear is a vital organ of human body. In fact, it helps in listening and it responds sounds.

2- Structure of human ear

"Human ear is comprises of three parts."



Following is a structure of ear:



3-

Function of human ear

"Human ear helps in hearing sound waves."

Human ear function is as follows:

a)

Outer ear

"Outer ear is consisted of three parts; pinna, external auditory canal and ear drum."

i)

Pinna

It is the outermost part. It helps in entrance of sound waves.

ii)

External Auditory Canal

It is a passage of sound waves and helps in passing waves.

iii)

Ear drum

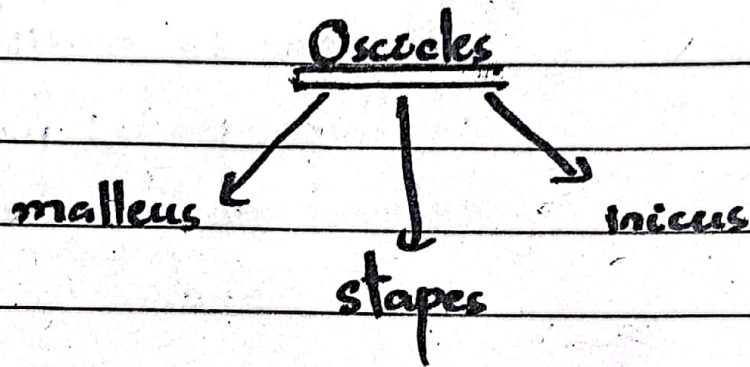
Ear drum produces vibration when sound waves hit it.

b)

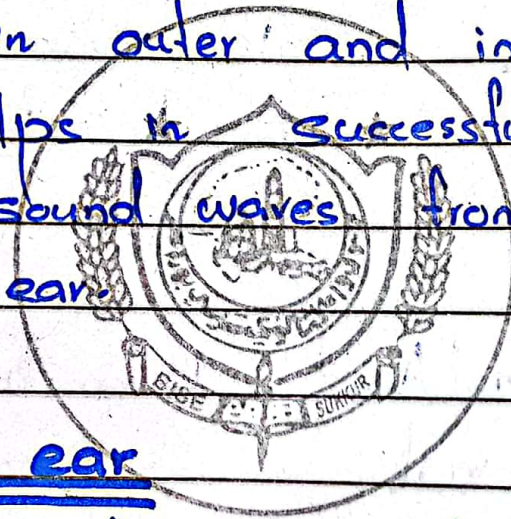
Middle ear

"Middle ear is composed of three small

bones, called ossicles."



Middle ear functions in between outer and inner ear. Thus, it helps in successful transmission of sound waves from outer ear to inner ear.



c) Inner ear

"Inner ear leads to final transmission of sound signals."

Inner ear is composed of semi-circular canal and cochlea. Cochlea helps in hearing 'sound waves'.

4-

External Auditory nerve

"External auditory nerve transmit sound signals to the brain."

Further, external auditory nerve leads to sound waves to the brain. Thus, brain responds according to it.

Q b)

Answer

1-

Vitamins

Note on vitamins

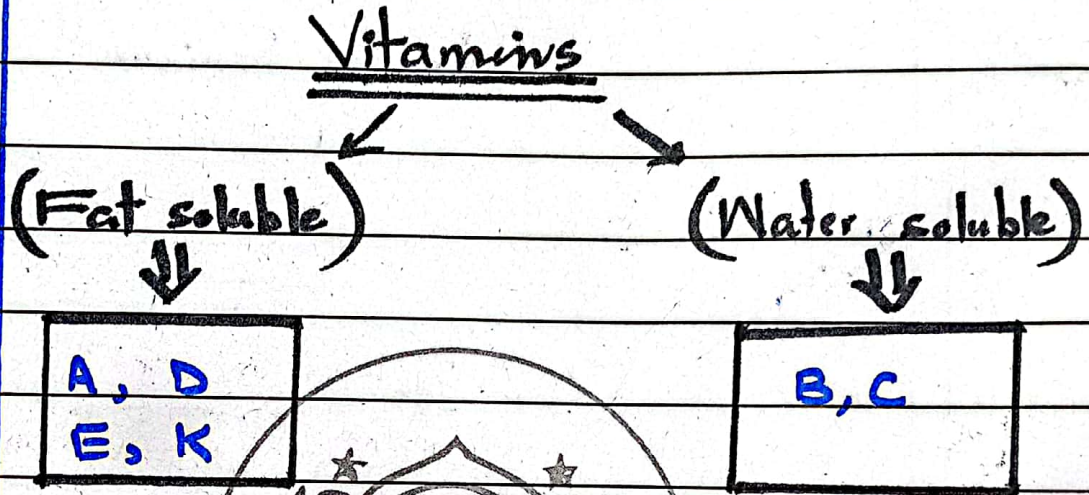
"Vitamins are vital nutrients."

Vitamins are chief components of our food. These are very necessary for proper growth of human body. Thus, vitamins are sources of healthy life.

2-

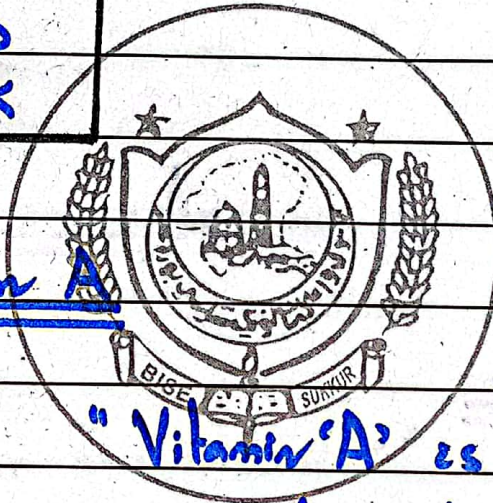
Categories of vitamins

Vitamins are divided into two categories as follows:



a)

Vitamin A



"Vitamin 'A' is a source of good vision."

i)

Sources

green-leafy vegetables and carrots

ii)

Deficiency

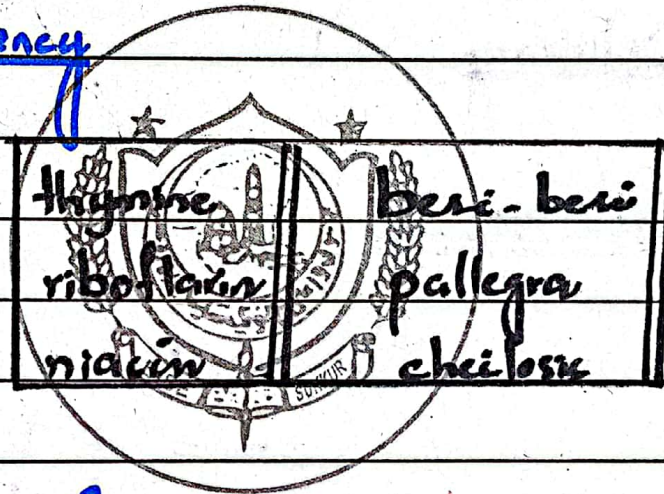
Its deficiency causes night blindness

b) Vitamin B

"Vitamin 'B' has mainly three types; thymine, riboflavin, and niacin."

i) Sources beans, dry fruits, fruits, milk etc

ii) Deficiency



c) Vitamin C

"Vitamin 'C' helps in healing wounds."

i) Sources citric acid containing fruit

ii) Deficiency It causes scurvy.

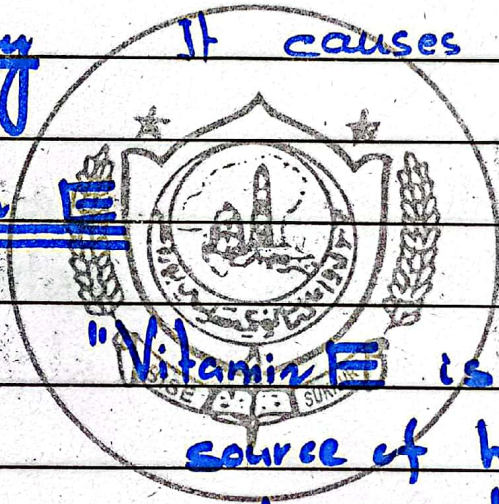
d) Vitamin D

"Vitamin D is a chief source of healthy bones."

i) Sources: mainly sunlight and milk

ii) Deficiency: It causes rickets.

e) Vitamin E



"Vitamin E is a main source of healthy hair and skin."

i) Sources: fruit, vegetable, milk etc

ii) Deficiency: rough hair and skin damage

f) Vitamin K

"Vitamin K helps in blood clotting."

- i) Source fruit, vegetable, milk etc.
- ii) Deficiency It causes neglect of clotting of blood.

Q. c 8a)

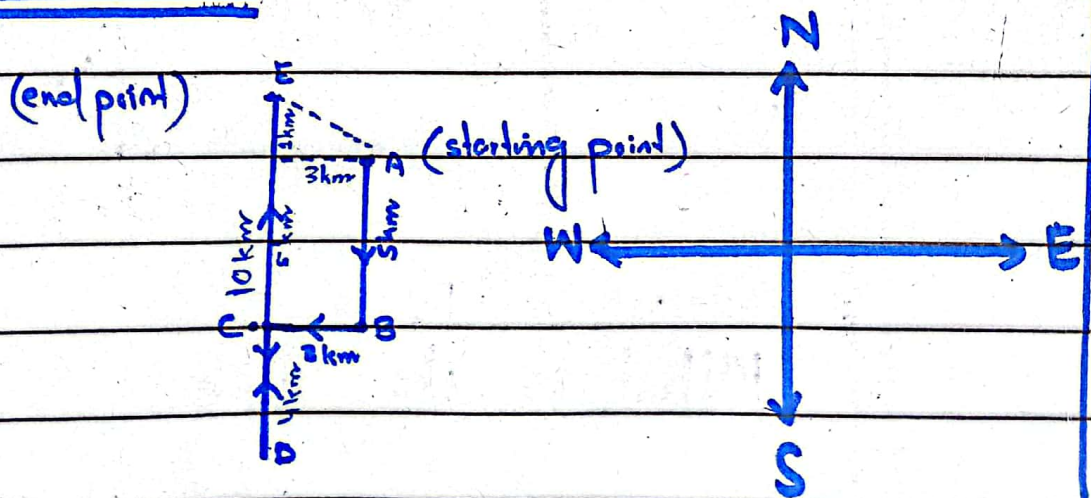
Answer

Data

5 km towards South
 right of South, 3 km
 next to left, 4 km
 straight back, 10 km

What is the distance and direction from the starting point?

Solution



So, distance is as below:

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

$$H = \sqrt{B^2 + P^2}$$

$$H = \sqrt{(3)^2 + (1)^2}$$

$$H = \sqrt{10}$$

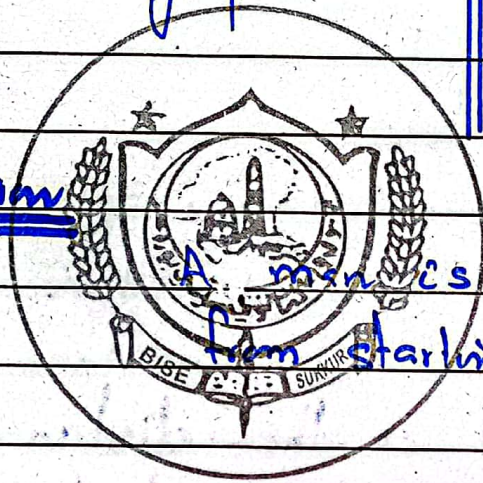
$$3.1 \text{ km}$$

Thus, he is 3.1 km from the starting point.

Rough work

$$\begin{array}{r} 3.1 \\ 3 \overline{) 10} \\ \underline{+ 3} \\ 9 \\ \underline{+ 1} \\ 9 \\ \underline{9 } \\ 2 \end{array}$$

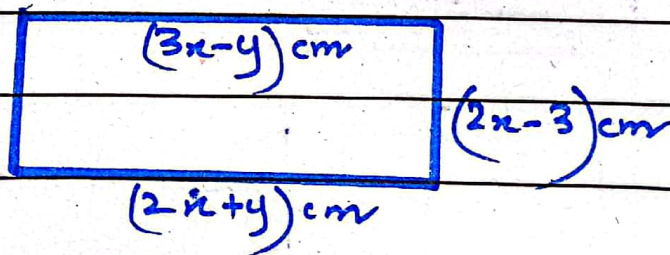
Direction



is in North-West from starting point.

Qd Gb

Data



$$\text{perimeter} = 114 \text{ cm}$$

What is its area?

Solution

$$P = 2(l + b)$$

$$114 = 2(3x - y + 2x - 3) \text{ cm}$$

$$114 = 6x - 2y + 4x - 6$$

$$114 = 10x - 2y - 6 \quad (\div 2)$$

$$\therefore, 57 = 5x - y - 3$$

$$\boxed{60 = 5x - y} \rightarrow \text{equation (1)}$$

Now,

$$\boxed{l_1 = l_2}$$

$$3x - y = 2x + y$$

$$3x - 2x = y + y$$

$$\boxed{x = 2y} \rightarrow \text{equation (2)}$$

By putting value of 'x' in equation 1.

$$60 = 5x - y$$

$$60 = 5(2y) - y$$

$$60 = 10y - y$$

$$60 = 9y$$

$$\boxed{y = 6.7}$$

Value of x,

$$x = 2y$$

$$x = 2(6.7)$$

$$\boxed{x = 13.3}$$