1. **Fill in the blanks.**

   (a) A _point_ has no length and no width.

   (b) A ray has _one_ endpoint only.

   (c) A _line_ has no endpoints and can be extended from both the ends.

2. **State true (T) or false (F) for the following statements.**

   (a) A line segment has a definite length.   _T_

   (b) A line cannot be drawn on a piece of paper.   _T_

   (c) A ray has three endpoints.   _F_

   (d) A line segment has one endpoint only.   _F_

   (e) A plane has fixed boundary.   _F_

3. **Classify the following as rays, lines and line segments. Also, name them.**

   (a)   (b)   (c)

   (d)   (e)   (f)
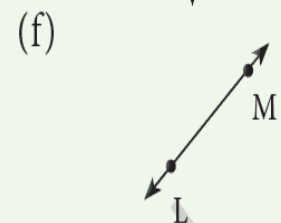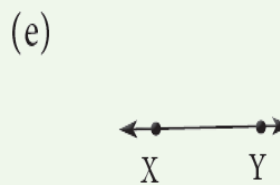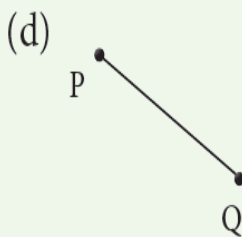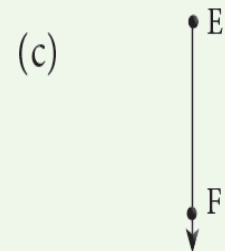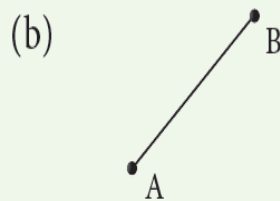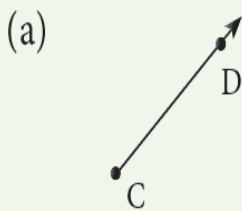
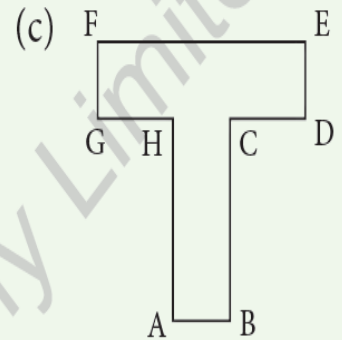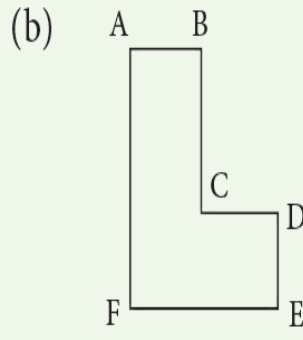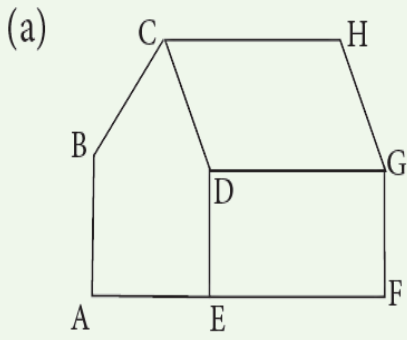**Solution 3:-** (a) Ray CD   (b) Line Segment AB or BA   (c) Ray EF

(e) Line XY or YX

In Q3. (d) and (f) are homework.

4. Count and name the line segments in each of the following figures.

(a)

(b)

(c)

Solution 4:-

(a)

Total = 10

Line segments = $\overline{AB}$, $\overline{BC}$, $\overline{CD}$, $\overline{DE}$, $\overline{EF}$, $\overline{FG}$, $\overline{DG}$, $\overline{GH}$, $\overline{HC}$, $\overline{AE}$

(c)

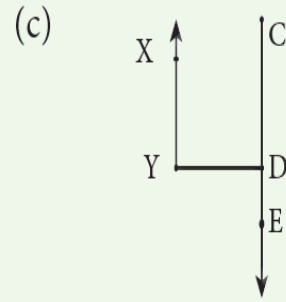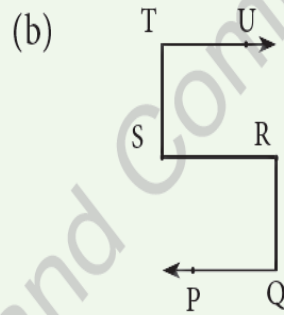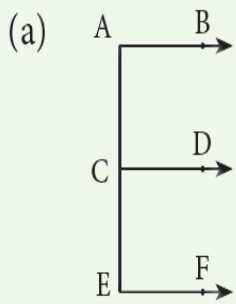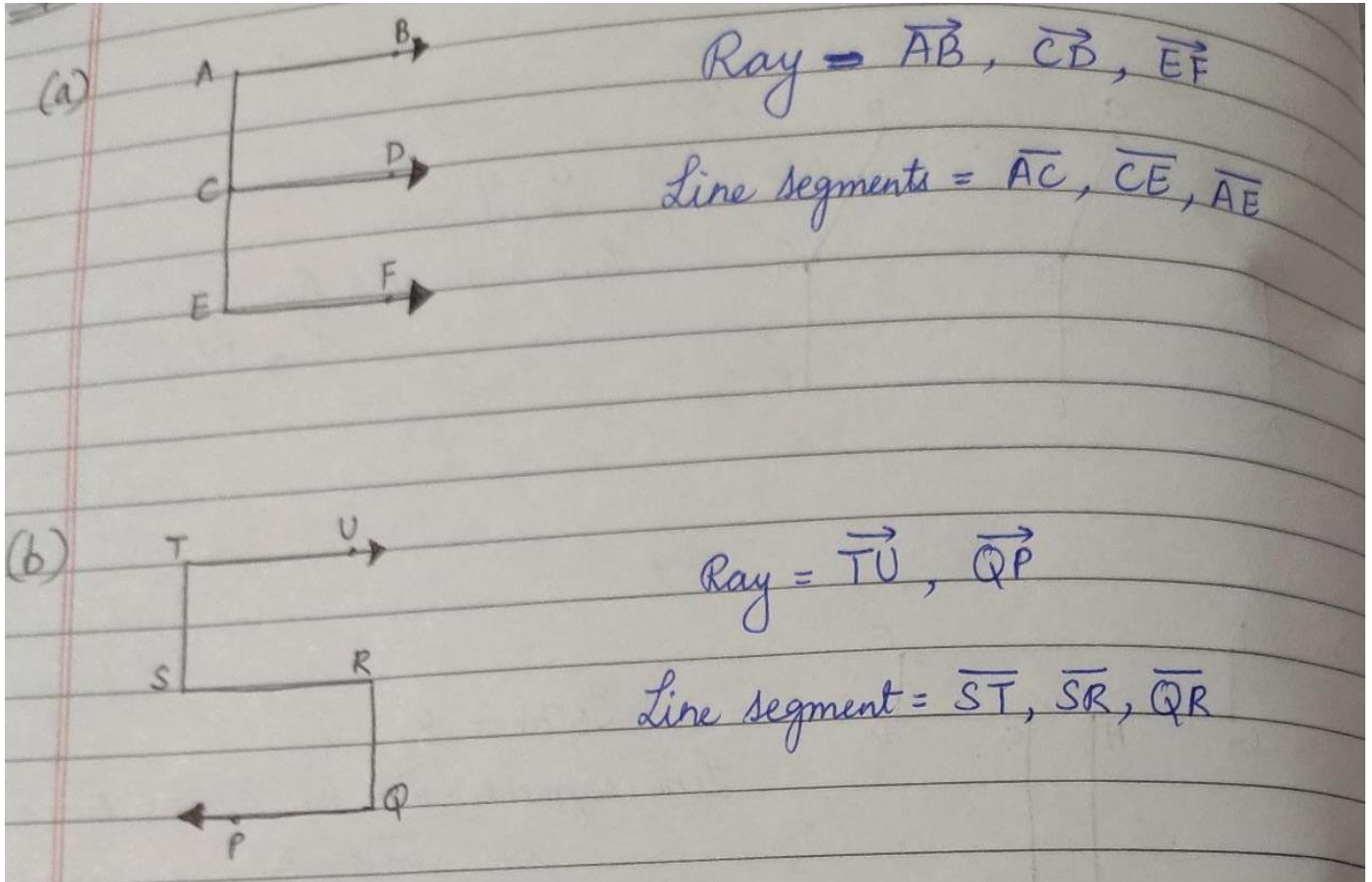Total = 8

Line segments = $\overline{AB}$, $\overline{BC}$, $\overline{CD}$, $\overline{DE}$, $\overline{EF}$, $\overline{FG}$, $\overline{GH}$, $\overline{AH}$.

In Q4. (b) is homework.

5. **Name the rays and line segments in the following figures.**

(a)

```
A          B
 ┌──────────►
 │
 │     D
C├──────────►
 │
 │
E└────F─────►
```

(b)

```
T          U
 ┌──────────►
 │
S│     R
 └─────┐
       │
   ◄───┘
  P    Q
```

(c)

```
X ▲       │C
  │       │
Y └───┐D
      │
      │·E
      ▼
```

Solution 5:-

(a)

Ray ⟹ $\overrightarrow{AB}$, $\overrightarrow{CD}$, $\overrightarrow{EF}$

Line segments = $\overline{AC}$, $\overline{CE}$, $\overline{AE}$

(b)

Ray = $\overrightarrow{TU}$, $\overrightarrow{QP}$

Line segment = $\overline{ST}$, $\overline{SR}$, $\overline{QR}$

In Q5. (c) is homework.

6. **Identify four plane surfaces in your daily life.**

Solution 6:-   **This question is homework.**