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STD-V
EX-11.1

A. Change into minutes.

1. 4 hours

As 1 hour = 60 minutes

So 4 hours = (60×4) minutes
= 240 minutes.

Ans 4 hours = 240 minutes.

3. 2h 5min

= 2 hours + 5 minutes

= (2×60) minutes + 5 minutes $(\because 1 \text{ hour} = 60 \text{ minutes})$

= 120 minutes + 5 minutes

= 125 minutes.

Ans. 2 hours 5 minutes = 125 minutes.

4. $11\frac{1}{2}$ hours.

= 11 hours + $\frac{1}{2}$ hour

= (11×60) minutes + $\frac{60}{2}$ minutes [As 1 hour = 60 minutes]

= 660 minutes + 30 minutes

= 690 minutes.

Ans. $11\frac{1}{2}$ hours = 690 minutes.

① Similarly do all. •

B. Change into seconds.

1. 6 minutes

As 1 minute = 60 seconds

So 6 minutes = (6×60) seconds = 360 seconds.

Ans. 6 minutes = 360 seconds.

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3. 5 min 14 seconds.

$$= 5 \text{ minutes} + 14 \text{ seconds. [As 1 minute} = 60 \text{ seconds]}$$

$$= (5 \times 60) \text{ seconds} + 14 \text{ seconds.}$$

$$= 300 \text{ seconds} + 14 \text{ seconds}$$

$$= 314 \text{ seconds.}$$

Ans. 5 min 14 seconds = 314 seconds.

4. $1\frac{1}{4}$ minutes

$$= 1 \text{ minutes} + \frac{1}{4} \text{ minutes}$$

$$= 60 \text{ seconds} + \frac{60}{4} \text{ seconds [As 1 minute} = 60 \text{ seconds]}$$

$$= 60 \text{ seconds} + 15 \text{ seconds}$$

$$= 75 \text{ seconds.}$$

Ans. $1\frac{1}{4}$ minutes = 75 seconds

① Similarly do all.

C. Change into hours and minutes.

1. 300 minutes.

$$\text{As } 60 \text{ minutes} = 1 \text{ hour}$$

$$\text{So } 300 \text{ minutes} = (300 \div 60) \text{ hour}$$

$$= 5 \text{ hours.}$$

$$\begin{array}{r|l} 60 & 300 & 5 \\ & \underline{300} & \\ & 0 & \end{array}$$

Ans. 300 minutes = 5 hours.

3. 350 minutes

$$\text{As } 60 \text{ minutes} = 1 \text{ hour}$$

$$350 \text{ minutes} = (350 \div 60) \text{ hour}$$

$$= 5 \text{ hours } 50 \text{ minutes}$$

$$\begin{array}{r|l} 60 & 350 & 5 \\ & \underline{300} & \\ & 50 & \end{array}$$

Ans. 350 minutes = 5 hours 50 minutes.

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2. Change into minutes and seconds

1. 375 seconds.

As 60 seconds = 1 minute.

375 seconds = $(375 \div 60)$ minutes

$$= 6 \text{ minutes } 15 \text{ seconds} \quad \left| \begin{array}{r} 60 \overline{) 375} \\ \underline{-360} \\ 15 \end{array} \right|$$

Ans 375 seconds = 6 minutes 15 seconds

2. 1800 seconds

As 60 seconds = 1 minute

1800 seconds = $(1800 \div 60)$ minutes
= 30 minutes.

Ans. 1800 seconds = 30 minutes.

$$\left| \begin{array}{r} 60 \overline{) 1800} \\ \underline{-1800} \\ 00 \\ \underline{-00} \\ 0 \end{array} \right| 30$$

E) Solve these word problems.

1. Time spent Jyoti in reading = 105 minutes

Hours required = $(105 \div 60)$ hours

$$= 1 \text{ hour } 45 \text{ minutes} \quad \left| \begin{array}{r} 60 \overline{) 105} \\ \underline{-60} \\ 45 \end{array} \right|$$

Ans. That is 1 hour 45 minutes.

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② The train stops for 120 seconds
 Required minute = $(120 \div 60)$ minutes

$$= 2 \text{ minutes.}$$

$$60 \overline{) 120} \begin{array}{r} 2 \\ \underline{120} \\ 0 \end{array}$$

Ans. The train stops for 2 minutes.

③ The plane was at Airport = 1 hour 20 minutes
 Required minutes for refueling = $1 \text{ hour} + 20 \text{ min}$
 $= 60 \text{ min} + 20 \text{ min}$
 $= 80 \text{ minutes.}$

Ans. The plane required 80 minutes for refueling.

④ Duration of a break = 20 seconds
 Number of breaks = 7
 Duration of breaks = (20×7) seconds
 Required minutes = 140 seconds.

$$= (140 \div 60) \text{ minutes}$$

$$= 2 \text{ minutes } 20 \text{ seconds}$$

$$= 2 \frac{1}{3} \text{ minutes}$$

$$= 2.33 \text{ minutes.}$$

$$1 \text{ second} = \frac{1}{60} \text{ min}$$

$$20 \text{ second} = \frac{20}{60} \text{ min}$$

$$= \frac{1}{3} \text{ min}$$

$$60 \overline{) 140} \begin{array}{r} 2 \\ \underline{120} \\ 20 \end{array}$$

Ans. The breaks lasted for a total of 2.33 minutes.