Changing hours to seconds.

Example 1

How many *seconds* are there in **1** *hour* ?

Since **1** *hour* = **60** *minutes*

and **1** *min* = **60** *seconds*

Therefore **1** *hr* = (60×60)

= **3600** *sec.*

Example 2

How many *seconds* are there in $2\frac{1}{2}$ *hours* ?

Since **1** *hr* = **60** *minutes*

and **1** *min* = **60** *seconds*

1 *hr* = (60×60) *secs*

$2\frac{1}{2}$ *hours* = $1\cancel{2}^{\frac{5}{\cancel{2}}} \times \cancel{60}^{30} \times 60$

$= 5 \times 30 \times 60$

$= 150 \times 60$

$= 9000$ *seconds*

Exercise 10: 7

Change the following to *seconds*

1. $\frac{1}{2}$ *hours* 2. $2\frac{1}{4}$ *hours* 3. **4** *hours* 4. $3\frac{1}{2}$ *hours* 5. **5** *hours*
6. **7** *hours* 7. $6\frac{1}{2}$ *hours* 8. **9** *hours* 9. $6\frac{1}{4}$ *hours* 10. $8\frac{3}{4}$ *hours*

Changing minutes or seconds to hours

Example 1

Change **360** *minutes* to *hours*

Since **60** *min.* = **1** *hour*

360 *min.* = $(360 \div 60)$ *hrs*

$= \frac{\cancel{360}^{6}}{1\cancel{60}}$ *hours*

= **6** *hours.*

Example 2

Change **18,000** *seconds* to *hours*

Since **3600** *sec.* = **1** *hour*

18000 *sec.* = (18000 ÷3600)

$= \frac{\cancel{18000}^{30}}{6\cancel{3600}}$

$= 1\cancel{30}^{5}$

$\therefore$ **18000** *sec.* = **5** *hours*

Exercise 10:8

Change the following to *hours*.

1. **180***min.* 2. **300** *min.* 3. **420** *min.* 4. **540** *min.*
5. **7200** *sec.* 6. **14,400** *sec.* 7. **1800** *sec.* 8. **21600** *sec.*
9. **390** *min.* 10. **19,800** *sec.*