

Time ch-30

units of time's

$$1 \text{ Yr} = 365/366 \text{ (if its leap year) days}$$

$$1 \text{ mnt} = 30/31 \text{ (except feb) days}$$

$$1 \text{ week} = 7 \text{ days}$$

$$1 \text{ day} = 24 \text{ hrs}$$

$$1 \text{ hrs} = 60 \text{ minutes}$$

$$1 \text{ min} = 60 \text{ sec}$$

$$1 \text{ Yr} = 12 \text{ mnt}$$

EX 20 (A)

1 convert

a 15 hours in min =

$$\begin{array}{r} 15 \\ \times 60 \\ \hline 900 \end{array}$$

$$\begin{array}{r} 15 \\ \times 60 \\ \hline 00 \\ 90 \\ \hline 900 \end{array}$$

b. 9 hr 56 min into min = 596 min

$$\begin{array}{r}
 50 \quad 60 \\
 \times 9 \\
 \hline
 540 + 56 = 596
 \end{array}$$

c) 36 min into sec = 2160 sec

$$\begin{array}{r}
 50, \quad 60 \\
 \times 36 \\
 \hline
 360 \\
 180 \\
 \hline
 2160
 \end{array}$$

d. 12 min 28 sec into sec = 748 sec

$$\begin{array}{r}
 50, \quad 60 \\
 \times 12 \\
 \hline
 120 \\
 60 \\
 \hline
 720 + 28 = 748
 \end{array}$$

e. 5 days in hrs

1 day = 24 hrs

so 5 day \times 24 hrs = $24 \times 5 = 120$ hrs

f. 12 days 9 hrs into hrs

1 day = 24 hrs

so $12 \times 24 = 288 + 9 = 297$ hrs

g. 11 hrs 45 min in mins

~~1 hr~~ 60 min = 1 hrs

so, 11 hrs = $\frac{60}{\times 11}$

$\frac{660}{+ 45} = 705$ min

2. convert

a. 5 yrs 9 mo into months

1 yr = 12 mo

5 yrs 9 mo = $5 \times 12 + 9 = 60 + 9 = 69$ months

b 9 week ^{into} days

$$1 \text{ week} = 7 \text{ days}$$

$$9 \text{ weeks} = 9 \times 7 = 63 \text{ days}$$

c 12 weeks 15 days into days

$$1 \text{ week} = 7 \text{ days}$$

$$12 \text{ week} =$$

d 7 weeks into hrs

$$1 \text{ week} = 7 \text{ day}$$

$$7 \text{ week} = 49 \text{ days}$$

$$1 \text{ day} = 24 \text{ hrs}$$

$$49 \text{ day} = 49 \times 24 = 1,176 \text{ hrs}$$

e 12 weeks 10 hrs into

$$1 \text{ week} = 7 \text{ day}$$

$$1 \text{ day} = 24 \text{ hrs}$$

$$12 \text{ week} = 12 \times 7 \times 24 = 2016 \text{ hrs} + 10 \text{ hrs} = 2026$$

F. 2 years 10 mnt into mnt

ans. 1 year = 12 mnt

2 years = $12 \times 2 + 10 = 34$ months

g.

3. convert

a. 1 day ^{into} sec

1 day = 24 hrs

1 min = 60 sec

~~1 day = 24~~ 1 hr = 60 min

24 hrs = $24 \times 60 = 1440$ min

1 day = $1440 \times 60 = 86400$ sec

b) 5 weeks into sec

$$1 \text{ week} = 7 \text{ days}$$

$$5 \text{ week} = 7 \times 5 = 35 \text{ days}$$

$$1 \text{ day} = 24 \text{ hrs} = 3600 \text{ sec}$$

$$35 \text{ days} \times 3600 \text{ sec} = 1,26,000 \text{ sec}$$

c) 2 months into seconds

$$1 \text{ hr} = 60 \text{ min}$$

$$24 \text{ hr} = 60 \times 24 = 1440 \text{ min}$$

$$1 \text{ hr} = 3600 \text{ sec}$$

$$\text{so } 1440 \times 3600 = 5,184,000 \text{ sec}$$

4. Convert:

a) 812 sec into minutes and sec

$$60 \text{ sec} = 1 \text{ min}$$

$$812 \text{ sec} = 812 \div 60 = 13 \text{ min } 32 \text{ sec}$$

b) 924 min into hr & min

$$60 \text{ min} = 1 \text{ hr}$$

$$924 \text{ min} = 924 \div 60 = 15 \text{ hr } 24 \text{ min}$$

c) 105 hr into days and hours
 $24 \text{ hr} = 1 \text{ day}$
 $105 \text{ hr} = 105 \div 24 = 4 \text{ days } 9 \text{ hr}$

d) 745 hr into days and hours
 $24 \text{ hr} = 1 \text{ day}$
 $745 \text{ hr} = 745 \div 24 = 31 \text{ days } 1 \text{ hr}$

e) 1024 min into hr & min
 $60 \text{ min} = 1 \text{ hr}$
 $1024 \text{ min} = 1024 \div 60 = 17 \text{ hr } 4 \text{ min}$

5 Convert

a) 512 days into weeks & days
 $7 \text{ days} = 1 \text{ week}$
 $512 \text{ days} = 512 \div 7 = 73 \text{ week } \& 1 \text{ day}$

b) 365 days into week & days
 $7 \text{ days} = 1 \text{ week}$
 $365 \text{ days} = 365 \div 7 = 52 \text{ weeks } 1 \text{ day}$

c) 52 month into yr & month
 $12 \text{ month} = 1 \text{ yr}$
 $52 \text{ month} = 52 \div 12 = 4 \text{ yr } 4 \text{ month}$

d) 86 months into year & months

$$12 \text{ mnts} = 1 \text{ yr}$$

$$86 \text{ mnt} = 86 \div 12 = 7 \text{ years } 2 \text{ months}$$

e) 342 days into month & day

$$30 \text{ days} = 1 \text{ month}$$

$$342 \text{ days} = 342 \div 30 = 11 \text{ months } 12 \text{ days}$$

f) 784 days into month & days

$$30 \text{ days} = 1 \text{ month}$$

$$784 \text{ days} = 784 \div 30 = 26 \text{ months } 4 \text{ days or } 2 \text{ yrs } 2 \text{ m } 4 \text{ days}$$

6. convert

a. 16 hours & 600 seconds into sec

$$1 \text{ hrs} = 60 \text{ mins}$$

$$16 \text{ hrs} = 16 \times 60 = 960 \text{ min}$$

$$60 \text{ seconds} = 1 \text{ min} \quad \text{so, } 600 \div 60 = 10 \text{ min}$$

$$\therefore 16 \text{ hrs } 600 \text{ sec} = 960 + 10 = 970 \text{ min}$$



543

b. 9 hrs 360 sec into ~~sec~~ min

1 hr = 60 min so, 9 hrs = $9 \times 60 = 540$ min

60 sec = 1 min so, 360 sec = $360 \div 60 = 6$ min

\therefore 9 hrs 360 sec = 546 min

c) 2 days 180 min into hrs

~~2~~ 1 day = 24 hrs so, 2 days = $2 \times 24 = 48$ hrs

60 min = 1 hr so 180 mins = $180 \div 60 = 3$ hrs

\therefore 2 days 180 min = 51 hrs

d. 9 days 420 min into hrs

1 day = 24 so 9 days = $24 \times 9 = 216$ hrs

60 min = 1 hr so 420 mins = $420 \div 60 = 7$ hrs

\therefore 9 days 420 min = 223 hrs