

## AW10 - Chapter 1 notes

Writing hours & minutes in decimal form

Min → Hours - minutes are part of an hour  
 - if you have 45 minutes  
     this is 45 out of 60  
 to convert to part of an hour  $\div 60$ .

So ...  $45 \text{ min} = \frac{45}{60} = 0.75$  of an hour.

Hours are already in hours so  
 if you have 2 hours and 45 minutes  
 \* only divide the minutes by 60 +  
 then put together.

$$2 \text{ h } 45 \text{ min} = 2 + \frac{45}{60} = 2.75 \text{ h}$$

Remember: there are 365 days in a year  
 12 months in a year  
 52 weeks in a year

and

60 seconds in a minutes  
 60 minutes in an hour  
 (60 x 60 ⇒ 360 seconds in an hour)

annual = a year

To change a decimal hour into hours  
 and minutes - multiply the decimal by 60.

ex.  $2.5 \text{ h} = 2 \text{ hours and } 0.5 \times 60 \text{ minutes}$   
 $= 2 \text{ h } 30 \text{ min}$ .

\*time  
is out  
of 60

To find a percent of a number  
 - change into a decimal and multiply.

$$10\% = \frac{10}{100} \text{ or } 10 \div 100 = 0.10$$

$$2\% = \frac{2}{100} \text{ or } 2 \div 100 = 0.02$$

If you want a percent increase

- ① change into a decimal ( $\div 100$ )
- ② multiply
- ③ add to original number

\$70 000 ; 5% increase

$$\text{① } 5 \div 100 = 0.05$$

$$\text{② } 0.05 \times 70\,000 = \underline{3500}$$

$$\text{③ } 70\,000 + \underline{3500} = 73\,500$$

If you want a percent decrease (deductions)

- ① change into decimal ( $\div 100$ )
- ② multiply
- ③ subtract from original number

\$500.00 wages ; 12% deductions

$$\text{① } 12 \div 100 = 0.12$$

$$\text{② } 500 \times 0.12 = 60$$

$$\text{③ } 500 - 60 = 540$$

## 1.2 Math 10 AW - notes

Hourly wages:

To find gross income multiply wages by number of hours worked.

ex. Sean makes \$10.00/h; he works 35 hours

$$10.00 \times 35 = \$350.00$$

\* remember money only has 2 decimal places so you have to round the answer to 2 decimals.

→ 4 or below → let it go!  
5 and up → round up.

ex. \$20.64/h; 12.3 hours

$$20.64 \times 12.3 = \$253.872$$

↑  
cut here

← if 4 or below cut off  
if 5 or above round  
the number before  
up.

$$= \$253.87$$

\* if it was  
253.876  
↳ the answer  
would be  
253.88

To find the hourly wage if given  
gross income & hours  
go backwards → divide

ex/ gross pay = \$562.50 # of hours = 45

$$562.50 \div 45 = 12.5$$

∴ the hourly wage is \$12.50.

## 1.4 Math 10AW - notes

Overtime - time over the regular hours  
- you get paid more than hourly wage.

Time and a half - multiply your hourly wage by 1.5

double time - multiply your hourly wage by 2.

\* overtime wage only applies to extra hours  
NOT regular hours.

ex Susan works 50 hours  
she is paid regular wage for 40 hours  
and time and a half for anything over 40.  
Here wage is \$10.00/hr

regular wage hours = 40  
 $40 \times 10 = \boxed{\$400}$  ← pay for regular hours

overtime hours →  $50 - 40 = 10$

time & a half wage =  $10 \times 1.5 = \$15/\text{hr}$

$10 \times \$15 = \$150$  ← pay for overtime

Add regular + overtime pay

$$= \$400 + \$150$$

$$= \$550$$

## Calculating hours from a time card

In                  out

7:00 Am          11:30 Am

ex #1

① Subtract hours  $\rightarrow 11 - 7 = 4$   $\rightarrow$  4h 30min

② Subtract minutes  $\rightarrow 30 - 0 = 30$

③ convert to decimal in hours  $= 4 + \frac{30}{60} = 4.5$  h

ex #2

If you get a negative number - do this

In                  Out  
6:55                  11:28

out - in

①  $11 - 6 = 5$

②  $28 - 55 = -27$

\* borrow  
from  
hour

What is 5 hours - 27 minutes

4 hours + 60 - 27 minutes

$= 4$ h 33 minutes

$= 4$ h +  $\frac{33}{60}$

$= 4.55$  h

ex #3

If you have Am & Pm in problem

\* put into a 24h clock by adding 12 to Pm

In                  Out  
10:30                  5:30

$\rightarrow 5:30 + 12 = 17:30$

①  $17 - 10 = 7$

②  $30 - 30 = 0$   $\rightarrow$  7 hours.

## 1.5 Math 10AW - notes

Commission - you get paid a % of what you sell.

To find commission

- ① put % in decimal ( $\div 100$ )
- ② multiply by sales.

ex Sold - \$2500      Commission - 6%

- ①  $6 \div 100 = 0.06$
- ②  $2500 \times 0.06 = \$150$  ← commission \$

To find salary + commission

- Ⓐ find commission as above
- Ⓑ add to salary

ex Salary - \$1000 / month      Sales - \$15000

- Ⓐ Commission - 3%
- ①  $3 \div 100 = 0.03$
  - ②  $15000 \times 0.03 = \$450$
- Ⓑ  $\$1000 + \$450 = \$1450$

To find hourly wage + commission

- Ⓐ find hourly wage pay (hours  $\times$  wage)
- Ⓑ find commission
- Ⓒ add together

ex \$9.50/h; 30 hours; 2% commission, \$5000 sales

- Ⓐ  $9.50 \times 30 = \$285$
- Ⓑ ①  $2 \div 100 = 0.02$   
②  $5000 \times 0.02 = \$100$
- Ⓒ  $\$285 + \$100 = \$385$

## 1.5) Different levels of commission

Companies offer different levels of commission to encourage their sales people to sell more.

ex 2% commission on 1st \$1000  
5% commission on sales over \$1000

You sold \$1500 so  $\rightarrow$  \$1000 gets 2% (0.02)  
 $\searrow$  \$500 gets 5% (0.05)  
(over 1000)

$$1000 \times 0.02 = \$20$$

$$500 \times 0.05 = 25$$

$$\text{Total} = \underline{\$45} \text{ commission}$$

## Reaching an income goal

You want to make \$2000 next month  
Your salary is \$750 and you earn  
4% commission on sales - How much  
do you have to sell? (hint go backwards  $\rightarrow$ )

① subtract wage from goal  $\Rightarrow$   $\$2000 - \$750$   
 $= \$1250$

② Before you x to find commission  
now divide to find sales

$$1250 \div 0.04 = \$31250$$

$\uparrow$   
\*

$\uparrow$   
commission

$\uparrow$   
this is how much  
you have to sell.

\* put  
% into  
decimal  
4% = 0.04

## 1.6 Math 10 AW - notes

Piecework - you get paid for each 'piece' that is made

To calculate earnings:

- multiply # made  $\times$  pay / item.

Strawberries - \$1.50 / basket

- 20 baskets picked.

$$\Rightarrow 1.50 \times 20 \Rightarrow \$30.00$$

To calculate "piece" price:

go backward  $\rightarrow$  Divide earnings by #

\$700 made; planted 1100 trees.

$$700 \div 1100 = 0.63\overline{6} = 0.64 / \text{tree}$$

↑  
roundup!

## 1.7 & 1.8 review CH1 notes