



Example 2)

Find the amount of tax and total cost of a book that cost \$15.

(a) Tax = 15% of Cost

$$\begin{array}{r} \downarrow \\ 0.15 \times \$15 \\ \hline \$2.25 \end{array}$$

Mental

$$\begin{array}{r} 10\% \text{ of } 15 = \$1.50 \\ 5\% \text{ of } 15 = 0.75 \\ \hline 15\% \text{ of } 15 = \$2.25 \end{array}$$

b) Total with tax = Cost + Tax

$$\begin{array}{r} \$15 + \$2.25 \\ \hline \$17.25 \end{array}$$

Discount and Sales Price

A discount is when they reduce the amount of an item or they put an item on sale.

$$\text{Amount of Discount} = \text{Rate of discount} \times \text{Regular Price}$$

$$\text{Sale Price} = \text{Regular Price} - \text{Amount of discount}$$

Example 1)

A stereo regularly sells for \$150, but it is on sale for 20% off.

(a) Find the amount of discount

(b) Find the sale price

$$\begin{aligned} \text{a) Amount discount} &= \% \times \text{Regular Price} \\ &= 20\% \times \$150 \\ &\quad \downarrow \\ &= 0.20 \times \$150 \\ &= \$30 \end{aligned}$$

$$\begin{aligned} \text{b) Sales Price} &= \text{Reg} - \text{Amount discount} \\ &= \$150 - \$30 \\ &= \$120 \end{aligned}$$

} Mentally

$$\begin{aligned} 10\% \text{ of } 150 &= 15 \\ \times 2 & \quad \times 2 \\ \hline 20\% \text{ of } 150 &= 30 \end{aligned}$$

2. A jacket that regularly sells for \$72.50 is discounted by 15%. What is the sale price?

$$\begin{aligned} \text{Amount discount} &= \% \times \text{Regular Price} \\ &= 15\% \times \$72.50 \\ &\quad \downarrow \\ &= 0.15 \times \$72.50 \\ &= \$10.88 \end{aligned}$$

$$\begin{aligned} \text{Sales Price} &= \text{Reg} - \text{Amount Saved} \\ &= 72.50 - 10.88 \\ &= 61.62 \end{aligned}$$

Percent Problems

1) Karen made 42 out of 50 on a test, what percentage did she make?

$$\frac{42}{50} \xrightarrow{\times 2} \frac{84}{100}$$

84%

2) If 30% of the school did not eat breakfast this morning and there is 340 students in the school, then how many students did not eat

breakfast?

$$\begin{array}{r} 30\% \times 340 \\ \downarrow \\ 0.30 \times 340 \\ \hline 102 \end{array}$$

$$\begin{array}{r} \text{Mentally} \\ 10\% \text{ of } 340 = 34 \\ \times 3 \\ \hline 30\% \text{ of } 340: 102 \end{array}$$

3) If a desk is on sale for 15% off and the sales price is \$535.50, then what was the original price?

15% off means the desk is now 85% of original Price

$$100\% - 15\% = 85\%$$

$$0.85 \times \text{Org} = \$535.50$$

$$\underline{0.85 \times \text{Org}} = \underline{\$535.50}$$

$$0.85 \qquad \qquad 0.85$$

$$\text{Org} = \$630$$

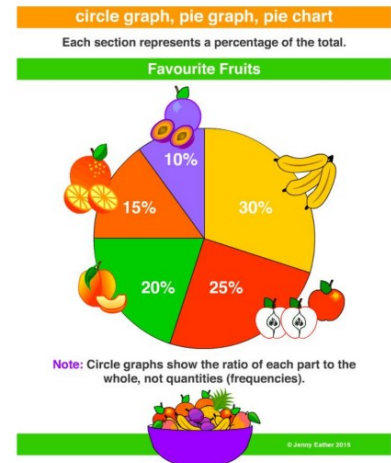
Circle Graphs

- Only tell you the percent of total (Not number of people)

- Total circle needs to add to 100%

- Circle is cut into sectors labelled with percent

- Total calculate number of people for each sector
 (% as decimal) x (Total Population)



- Total calculate sector angle used to draw the circle graph

(% as decimal) x (360°)

ex) If 80 people were interviewed, then how many people like bananas?

30% of People like bananas
 ↓
 0.30 x 80
 24

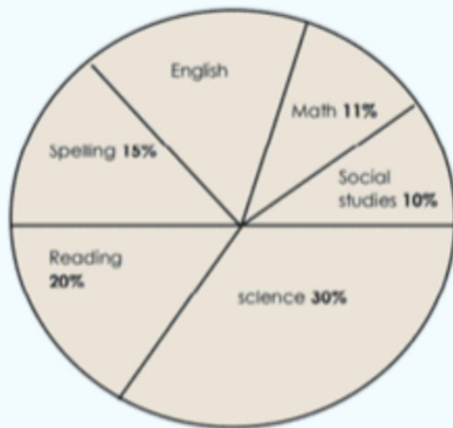
10% of 80 = 8
 30% of 80 = 24

ex) What would be the sector angle for the peaches?

↓
 20%

Sector = % x 360°
 20% x 360°
 ↓
 0.20 x 360°
 72°

The following graph shows the time spent on homework on different subjects. Read the graph and answer the following questions.



a) What percent is spent on English?

b) If there are 120 students interviewed for this study, then how many do their reading homework?

c) What is the sector angle size for science?

Percent, Sales Tax & Discount Worksheet