Creation of a Font: Converting to Different Measuring Systems

Instructions:

For this sheet, you will convert all of your perimeter, area, volume, & mass to System International or Imperial system.

Conversion Table

Metric	Imperial
25.4 mm	1 in
2.54 cm	1 in
1 m	3 ft
1 m	1.09 yds
1.6 km	1 Mile
1 g	0.352739619 oz

Which one are you converting to: Imperial

Perimeter:

Total:

142 cm

$$\frac{2.54cm}{1in} = \frac{142cm}{xin}$$

$$2.54xcmin = 142cmin$$

$$xin = \frac{142cmin}{2.54cm}$$

$$xin = 55.91\ in$$

Letters:

Letter	C	I	A	R	C
Perimeter	$P = 13.28\ cm$ $\frac{2.54cm}{1in} = \frac{13.28cm}{x}$ $13.28 = 2.54x$ $5.23\ in$	$P = 4.56\ cm$ $\frac{2.54cm}{1in} = \frac{4.56cm}{x}$ $4.56 = 2.54x$ $1.80\ in$	$P = 13.40\ cm$ $\frac{2.54cm}{1in} = \frac{13.4cm}{x}$ $13.4 = 2.54x$ $5.28\ in$	$P = 7.51\ cm$ $\frac{2.54cm}{1in} = \frac{7.51cm}{x}$ $7.51 = 2.54x$ $2.96\ in$	$P = 7.32\ cm$ $\frac{2.54cm}{1in} = \frac{7.32cm}{x}$ $7.32 = 2.54x$ $2.88\ in$

Letter	I	a	G	L	i

Perimeter	$P = 4.56\ cm$ $\frac{2.54cm}{1in} = \frac{4.56cm}{x}$ $4.56 = 2.54x$ $1.80\ in$	$P = 13.40\ cm$ $\frac{2.54cm}{1in} = \frac{13.4cm}{x}$ $13.4 = 2.54x$ $5.28\ in$	$P = 17.69\ cm$ $\frac{2.54cm}{1in}$ $= \frac{17.69cm}{x}$ $17.69 = 2.54x$ $6.96\ in$	$P = 10.62\ cm$ $\frac{2.54cm}{1in} = \frac{10.62cm}{x}$ $10.62 = 2.54x$ $4.18\ in$	$P = 4.56\ cm$ $\frac{2.54cm}{1in} = \frac{4.56cm}{x}$ $4.56 = 2.54x$ $1.80\ in$
Letter	N	i			
Perimeter	$P = 6.78\ cm$ $\frac{2.54cm}{1in} = \frac{6.78cm}{x}$ $6.78 = 2.54x$ $2.67\ in$	$P = 4.56\ cm$ $\frac{2.54cm}{1in} = \frac{4.56cm}{x}$ $4.56 = 2.54x$ $1.80\ in$			

Area:

Total:

$$A = 840\ cm^2$$

Conversion: $1\ in^2 = 6.4516\ cm^2$

$$\frac{840\ cm^2}{x\ in^2} = \frac{6.4516cm^2}{1in^2}$$

$$6.4516x = 840$$

$$x = 130.20\ in^2$$

Letters:

Letter	C	I	A	R	C
Area	$A = 49.50\ cm^2$ $\frac{49.50\ cm^2}{x\ in^2} = \frac{6.4516cm^2}{1in^2}$ $6.4516x = 49.50$ $x = 7.67\ in^2$	$A = 2.5\ cm^2$ $\frac{2.5\ cm^2}{x\ in^2} = \frac{6.4516cm^2}{1in^2}$ $6.4516x = 2.50$ $x = 0.39\ in^2$	$A = 29.4\ cm^2$ $\frac{29.4cm^2}{x\ in^2} = \frac{6.4516cm^2}{1in^2}$ $6.4516x = 29.4$ $x = 4.56\ in^2$	$A = 16\ cm^2$ $\frac{16cm^2}{x\ in^2} = \frac{6.4516cm^2}{1in^2}$ $6.4516x = 16$ $x = 2.48\ in^2$	$A = 15.75\ cm^2$ $\frac{15.75\ cm^2}{x\ in^2} = \frac{6.4516cm^2}{1in^2}$ $6.4516x = 15.75$ $x = 2.44\ in^2$
Letter	I	A	G	L	I
Area	$A = 2.5\ cm^2$ $\frac{2.5\ cm^2}{x\ in^2} = \frac{6.4516cm^2}{1in^2}$ $6.4516x = 2.50$ $x = 0.39\ in^2$	$A = 29.4\ cm^2$ $\frac{29.4cm^2}{x\ in^2} = \frac{6.4516cm^2}{1in^2}$ $6.4516x = 29.4$ $x = 4.56\ in^2$	$A = 38\ cm^2$ $\frac{38\ cm^2}{x\ in^2} = \frac{6.4516cm^2}{1in^2}$ $6.4516x = 38$ $x = 5.89\ in^2$	$A = 22.5\ cm^2$ $\frac{22.5\ cm^2}{x\ in^2} = \frac{6.4516cm^2}{1in^2}$ $6.4516x = 22.5$ $x = 3.48\ in^2$	$A = 2.5\ cm^2$ $\frac{2.5\ cm^2}{x\ in^2} = \frac{6.4516cm^2}{1in^2}$ $6.4516x = 2.50$ $x = 0.39\ in^2$

Letter	N	I			
Area	$A = 18\ cm^2$ $\frac{18\ cm^2}{x\ in^2} = \frac{6.4516 cm^2}{1 in^2}$ $6.4516x = 2.50$ $x = 2.79\ in^2$	$A = 2.5\ cm^2$ $\frac{2.5\ cm^2}{x\ in^2} = \frac{6.4516 cm^2}{1 in^2}$ $6.4516x = 2.50$ $x = 0.39\ in^2$			

Volume:

Total:

$$V = 420{,}000\ mm^3$$

Conversion: $\frac{25.4\ mm}{1\ in} = \frac{16{,}387.064\ mm^3}{1\ in^3}$

$$\frac{420{,}000\ mm}{x} = \frac{16{,}387.064}{1}$$

$$420{,}000 = 16{,}387.064x$$

$$\frac{420{,}000}{16{,}387.064} = x$$

$$25.63\ in^3 = x$$

Conversion: $\frac{2.54\ cm}{1\ in} = \frac{16.387064\ cm^3}{1 in^3}$

Letters:

Letter	C	I	A	R	C
Volume	$V = 2.475\ cm^3$ $\frac{2.475 cm^3}{x} = \frac{16.387064}{1}$ $2.475 = 16.387064x$ $\frac{2.475}{16.387064} = x$ $0.15\ in^3 = x$	$V = 0.125\ cm^3$ $\frac{0.125\ cm^3}{x} = \frac{16.387064}{1}$ $0.125 = 16.387064x$ $\frac{0.125}{16.387064} = x$ $0.01\ in^3 = x$	$V = 1.47\ cm^3$ $\frac{1.47\ cm^3}{x} = \frac{16.387064}{1}$ $1.47 = 16.387064x$ $\frac{1.47}{16.387064} = x$ $0.09\ in^3 = x$	$V = 0.8\ cm^3$ $\frac{0.8\ cm^3}{x} = \frac{16.387064}{1}$ $0.8 = 16.387064x$ $\frac{0.8}{16.387064} = x$ $0.05\ in^3 = x$	$V = 0.79\ cm^3$ $\frac{0.79\ cm^3}{x} = \frac{16.387064}{1}$ $0.79 = 16.387064x$ $\frac{0.79}{16.387064} = x$ $0.05\ in^3 = x$
Letter	I	A	G	L	I

Volume	$V = 0.125\ cm^3$ $\frac{0.125\ cm^3}{x} = \frac{16.387064}{1}$ $0.125 = 16.387064x$ $\frac{0.125}{16.387064} = x$ $0.01\ in^3 = x$	$V = 1.47\ cm^3$ $\frac{1.47\ cm^3}{x} = \frac{16.387064}{1}$ $1.47 = 16.387064x$ $\frac{1.47}{16.387064} = x$ $0.09\ in^3 = x$	$V = 1.9\ cm^3$ $\frac{1.9\ cm^3}{x} = \frac{16.387064}{1}$ $1.9 = 16.387064x$ $\frac{1.9}{16.387064} = x$ $0.12\ in^3 = x$	$V = 1.13\ cm^3$ $\frac{1.9\ cm^3}{x} = \frac{16.387064}{1}$ $1.9 = 16.387064x$ $\frac{1.9}{16.387064} = x$ $0.09\ in^3 = x$	$V = 0.125\ cm^3$ $\frac{0.125\ cm^3}{x} = \frac{16.387064}{1}$ $0.125 = 16.387064x$ $\frac{0.125}{16.387064} = x$ $0.01\ in^3 = x$
Letter	N	I			
Volume	$V = 0.90\ cm^3$ $\frac{0.90\ cm^3}{x} = \frac{16.387064}{1}$ $0.90 = 16.387064x$ $\frac{0.90}{16.387064} = x$ $0.05\ in^3 = x$	$V = 0.125\ cm^3$ $\frac{0.125\ cm^3}{x} = \frac{16.387064}{1}$ $0.125 = 16.387064x$ $\frac{0.125}{16.387064} = x$ $0.01\ in^3 = x$			

Mass:

$$m = 840\ g$$

Conversion: $1\ g = 0.352739619$ oz

$$\frac{0.0025\ g}{x\ oz} = \frac{1\ g}{0.352739619\ oz}$$

$$x = 0.00088\ oz$$