

# Arithmetic.

$$\begin{array}{r}
 \cdot 25 \text{ of } 4 \text{ rods} + \quad \cdot 05 \text{ of } 60 \text{ chs} - \quad \cdot 375 \text{ of } 72 \text{ yds} \\
 \frac{1}{4} + \frac{4}{1} = \frac{1}{4} \text{ rod} = \quad \quad \quad 50 \times \frac{60}{1} = 3 \text{ chs} = \quad \quad \quad \frac{3}{8} \times \frac{72}{1} \text{ yds} = 27. \\
 \underline{\underline{5 \frac{1}{2} \text{ yds.}}} \quad \quad \quad \underline{\underline{55 \text{ yds.}}} \quad \quad \quad \underline{\underline{27.}}
 \end{array}$$

$$\begin{array}{r}
 55 \text{ yards} \\
 \underline{5 \frac{1}{2} \text{ "}} \\
 60 \frac{1}{2} \text{ "} \\
 \underline{27} \\
 \underline{\underline{33 \frac{1}{2} \text{ yards}}}
 \end{array}$$

Ans. 33  $\frac{1}{2}$  yards

If 2 cows in 5 days eat 20 bush of maize how long would 6 calves be in eating 10 bush of pease, if 1 cow eat as much as 2  $\frac{1}{2}$  calves and pease, in feeding power being  $\frac{2}{3}$  that of maize.

$$\begin{array}{r}
 6 : 2 : 5 \text{ days} \\
 20 : 10 \\
 1 : 2 \frac{1}{2} \\
 \underline{\underline{3 : 2}}
 \end{array}$$



$$\begin{array}{r}
 18 \overline{) 25} \quad | \quad 1 \\
 \underline{18} \\
 7 \\
 \underline{18}
 \end{array}$$

Ans. 1  $\frac{1}{2}$  day.

$$\begin{array}{r}
 \underline{5} \quad \underline{2} \quad \underline{10} \quad \underline{5} \quad \underline{2} \quad \underline{1} \quad \underline{1} \quad \underline{1} \\
 1 \quad + \quad 1 \quad + \quad 1 \quad 2 \quad 1 \quad 3 \quad 20 \quad 6 \quad 3
 \end{array}$$

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# Geography

Baku

Oil-wells, on the Caspian Sea, east end of Caucasus Mts.

Spokane

Town

in Washington State, in United States (American)

Stuicken

River

on the proposed Canadian Railway

Laird

River

Testin

Lake

to the Klondike gold fields.

Gelenora

Town

Dawson

City

near Klondike

Juneau

City

Port

in China Corea, on the South coast.

Hamilton

Town

Kiao-chow

Town

on the North, east coast of China.

Port Arthur

Town

Talienwan

Town

both on the North of the Yellow Sea, belongs to Russia

Rio-Grande

River

flows S.E. from Rocky Mounts. forming boundary between Mexico and United States.

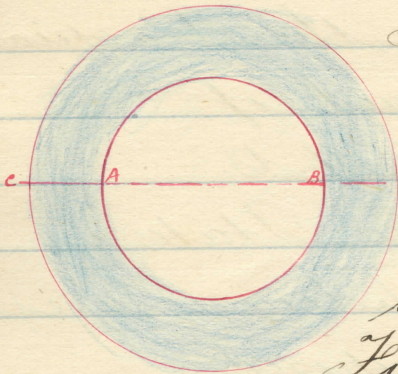
Del-Norte



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## Mensuration.



To find the width of a strip of uniform width around a circle:-  
Suppose the inside circle contains 154 square chs. and the outside strip, 642 sq chains.

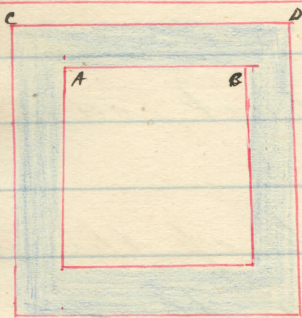
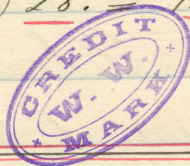
Find diameter of small circle =

$$\frac{154}{7} \times \frac{14}{7} = 196 \text{ square root being } \underline{14 \text{ chs}} \text{ (A to B.)}$$

Then add both areas,  $154 + 642 = \underline{616}$  Large circle's area

Next  $616 \times \frac{14}{7}$  and Ext. Sq. root. =  $\underline{28 \text{ chs}}$  (C to D)

Take (a.B)  $\underline{14}$  from (c.D)  $\underline{28} = \underline{14}$ . Therefore c. to A. is  $\underline{7 \text{ chains}}$ .



To find the width of strip around a square

Suppose the small square so contain  $\underline{62\frac{1}{2} \text{ acres}}$  and the strip  $\underline{60 \text{ acres}}$

Then the large sq. holds  $\underline{122\frac{1}{2} \text{ acres}}$

$\therefore$  Square root of  $\underline{625 \text{ chs}} = \underline{25 \text{ chs}}$  (A to B.)

and " "  $\underline{1225}$  " =  $\underline{35}$  " (C to D)

Difference  $\underline{10 \text{ chs}}$  & half the difference is the width of the strip viz -  $\underline{5 \text{ chs}}$ .

## Derivations.

	Word	Pref	Root.		Affix.
circle:-	Went		Wenden-go	L	
shirt-	Shirt		Sceran to cut	S	
he	Criminal		crimen a charge	L	al-form Adj
-	Congreg- ate	con- with	Grex. a flock	L	ate so make.
Caesarea	Fancy		Phantazo- appear	S	-y Abs Idea
A.	Thermo- meter		Thermos warm Metron measure	S	
d	Orthodox		Orthos right Doxa-	S	
tain	Admire	Ad. to	opinion Mirus- wonderful	L	
	Resolve	Re-back	Solvo-loose	L	
the	Zoology		Zoon - animals Logus - reason	S	



"Polished the precious  
jewel is with friction,  
Pure is the gold that  
comes through cleans-  
ing fires;

And in Thy crucible of  
sore affliction  
Are burnt out earthly  
thoughts and  
vain desires"

(J. B. M. S.  
Australian Poem.



## Arithmetic.

If 4 cannon firing 6 rounds in 4 minutes use 80 tons of metal in 3 hours what number of cannon firing 4 rounds in 6 minutes, will use 40 tons in half an hour.

As tons. 80: 40 :: 4 cannon.

round. 4: 6

min 4: 6

time  $\frac{1}{2}$ : 3

$$4 \times \frac{40 \times 6 \times 6 \times 3}{1 \times 1 \times 1 \times 1} \div \frac{4 \times 4 \times 80}{1 \times 1 \times 1}$$

$$\frac{4}{1} \times 40 \times 6 \times 6 \times 3 \div 2 \times 1 \times 1 \times 1 = 27$$

1 1 1 1 1 4 4 80  
4 3

Ans 27 cannon.



.00375 of 1000 rods + .275 chs. - .05 of 30 yards +  
.1875 of 12 ft. (ans in yards)

$\begin{array}{r} .00375 \\ \hline 1000 \\ 5.75 \\ \hline 5 \\ 18.75 \\ \hline 1.875 \\ \hline 20.625 \text{ yards.} \end{array}$	$\begin{array}{r} .275 \\ \hline 22 \\ 6.05 \text{ yds} \end{array}$	$\begin{array}{r} .05 \\ \hline 30 \\ 1.50 \text{ yards} \end{array}$	$\begin{array}{r} .1875 \\ \hline 4 \\ 7.500 \end{array}$
	$\begin{array}{r} 20.625 \\ 6.05 \\ \hline 26.675 \\ 1.05 \\ \hline 25.625 \\ 750 \\ \hline 25.925 \end{array}$	<p><u>Ans. 25.925 yards</u></p>	

## Spelling.

Adulations.

Antiquities.

Appetites.

Bouquets.

Catastrophe.

Delicate.

Dungeons.

Embroidered.

Fashioned.

Fivolities.

Gossiped.

Imprecations.

Luxuries.

Mysteries.

Responses.

Sauntering.

Stimulate.

Symbolic.

Vestibule.

Phenomena.

Annoyance.

Periodical.

Monotony.

Lassitude.

Inured.

Augmented.

Aqueous.

Declivities.

Paroxysms.

Intermittent.

Instantaneous.

Saturated.

Supervenes.

Embellished.

Portcullis.

Mewling.

Oblivion.

Melancholy.

Etiquette.

Palisade.



## Syntax

Incorrect "Who was you seeking at the door?"  
Correct "Whom <sup>(2)</sup> were you seeking at the door."

Rule.  
1. Active transitive verbs govern the objective case.  
2. Verb must agree with its subject in number.

Incorrect. They are the boys which I saw.  
Correct. "They are the boys whom I saw."

Rule "Which" is only used for animals and things. "Whom," for persons.

Incorrect. This is not one of them books what have no pictures.

Correct. This is not one of those books that <sup>(2)</sup> have no pictures.

Rule.  
1. Pronouns in objective case cannot be used as Adjectives.

(2) "What" has its own Antecedent.





# Arithmetic

Value of  $2.145$  of  $5/8 \frac{3}{4}$

$$\begin{array}{r} 118 \\ \hline 55 \end{array} \times \begin{array}{r} 68 \frac{3}{4} \\ \hline 1 \end{array} = \underline{\underline{147 \frac{1}{2}}}$$

$$\begin{array}{r} 59 \\ \hline 118 \\ \hline 55 \\ \hline 5 \end{array} \begin{array}{r} 25 \\ \hline 275 \\ \hline 4 \\ \hline 2 \end{array} \begin{array}{r} 295 \\ \hline 295 \\ \hline 2 \\ \hline 2 \end{array} \begin{array}{r} 880 \\ \hline 880 \\ \hline 55 \\ \hline 145 \\ \hline 1 \end{array}$$

$$\begin{array}{r} 12 \overline{) 147 \frac{1}{2}} \\ \underline{12} \phantom{.3} \phantom{\frac{1}{2}} \\ 27 \phantom{\frac{1}{2}} \\ \underline{24} \phantom{\frac{1}{2}} \\ 3 \phantom{\frac{1}{2}} \\ \underline{3} \phantom{\frac{1}{2}} \\ 0 \phantom{\frac{1}{2}} \\ \underline{0} \phantom{\frac{1}{2}} \\ 0 \phantom{\frac{1}{2}} \\ \underline{0} \phantom{\frac{1}{2}} \\ 0 \phantom{\frac{1}{2}} \end{array}$$

$$\begin{array}{r} 55 \\ \hline 2 \\ \hline 110 \\ \hline 8 \\ \hline 880 \\ \hline 55 \\ \hline 145 \\ \hline 1 \\ \hline 144 \phantom{.24} \phantom{.8} \\ \hline 490 \phantom{.165} \phantom{.55} \end{array}$$

Answer £0.12.3½.

If the diameter of the moon is 2156 miles, how many acres on its surface?

$$\begin{array}{r} 308 \\ \hline 2156 \times 2156 \times 22 \times 640 \end{array}$$

$$\begin{array}{r} 14609056 \\ \phantom{14609056} 640 \\ \hline 584362240 \\ \hline 87654336 \\ \hline 934795840 \end{array}$$



$$\begin{array}{r} 2165 \\ \hline 308 \\ \hline 17248 \\ \hline 6468 \\ \hline 664048 \\ \hline 22 \\ \hline 1328096 \\ \hline 1328096 \\ \hline 14609056 \end{array}$$

Answer. 934795840 acres.

Warrnambool.  
Kings Street  
Oct. 11<sup>th</sup> 1898

My Dear Millie

I received your last letter just before I left for Melbourne, I was very pleased to hear that you enjoyed your holiday at the Lakes. I have just come home from Ballarat; I enjoyed myself very much. I went to Melbourne by boat, and it was something terrible to see the waves, the boat would go down into a deep hollow, while, above us at the back of the steamer, the waves were like mountains. Nearly every-body on the boat was sick; I was not very bad, but, one time I was trying to cross the deck, and I fell and hurt my foot.

Hoping to hear from you soon,  
I am your affectionate friend,  
To Miss M. Stephens.



May.

24 8  
165 33

2156

ts