

now preparing and printing, or writing upon the black-board, reading lessons that are based upon nature study, or stories told, or other school exercises. These lessons are composed by children and teacher working together, she writing each sentence as it is formed. It would be a good plan for the teacher to provide slips and have the best writers in the primary class, or in the next class above it, write out a series of such reading lessons. It would give a wonderful impetus to good writing in the early grades, for the children to know that their work was to serve as models.

#### A GOOD EXERCISE.

Suppose a cube 3 inches on a side to be painted over its entire surface. Now let the block be cut into cubes 1 inch on a side. How many such cubes will there be?

How many will not be painted at all?

How many on one side only?

How many on two sides?

How many on three sides?

Where are the cubes that are painted on three sides?

On two sides?

On one side?

With quite young children, it would be a profitable exercise to bring the cube before the class, paint it, cut it, and so answer these questions by ocular inspection.

But, with older pupils, it will be better to let the work be seen by the "mind's eye" alone. We think many pupils in the geometry class may find it not easy to answer some of the questions. Construct similar questions for 2-inch and 4-inch cubes.—*Home and School Education*.

#### 'ROUND TABLE TALKS.

B. M.—(1) The average of ten results was 17.5. That of the first three was 16.25, and of the next four 16.5; the eighth was three less than the ninth, and four less than the tenth. What was the tenth?

(2) The gross receipts of a railway company in a certain town are apportioned thus: 40% to pay the working expenses, 54% to give the shareholders a dividend at the rate of  $3\frac{1}{2}\%$  on their shares, and the remainder, \$425.25, is reserved. What was the paid-up capital of the company?

$$(1) \text{ Sum of the ten results} = 10 \times 17.5 = 175$$

$$\text{Sum of the first three} = 3 \times 16.25 = 48.75$$

$$\text{Sum of the next four} = 4 \times 16.5 = 66$$

$$\text{Therefore the sum of the last three} = 175 - 114.75 = 60.25.$$

$$\text{The tenth} = \text{the eighth} + 4$$

$$\text{The ninth} = \text{the eighth} + 3$$

$$\text{The eighth} = \text{the eighth}.$$

$$\text{Therefore the last three} = 3 \times \text{the eighth} + 7 = 60.25$$

$$\text{Therefore } 3 \times \text{the eighth} = 53.25$$

$$\text{the eighth} = 17.75$$

$$\text{the ninth} = 20.75$$

$$\text{the tenth} = 21.75$$

$$(2) \text{ Since } 6\% \text{ of gross receipts} = \$425.25$$

$$\text{Therefore the gross receipts} = \frac{100 \times 425.25}{6} = \$7087.50$$

$$\text{Now } 3\frac{1}{2}\% \text{ of the capital} = \frac{54}{100} \text{ of } \$7087.50$$

$$\text{Therefore the paid-up capital} = \frac{\$100 \times 54 \times 7087.50}{3\frac{1}{2} \times 100} = \$10935000$$

J. B. J.—(1) How many minutes from 14.20 o'clock, June 24th, 1896, to 8.40 o'clock, Jan. 3rd, 1901?

(2) In 3 lb. 2 oz. 11 dwt. 14.4 gr. how many grams?

	days.	hrs.	min.
(1) What is left of the			
24th of June.....	0	9	40
Remaining part of June, 6	0	0	0
Days in July.....	31	0	0
Days in August.....	31	0	0
Days in September....	30	0	0
Days in October.....	31	0	0
Days in November....	30	0	0
Days in December....	31	0	0
Days in 1897.....	365	0	0
Days in 1898..	365	0	0
Days in 1899. ....	365	0	0
Days in 1900.....	365	0	0
Days in Jan., 1901....	2	8	40

$$1652 \ 18 \ 20 = 2379980 \text{ minutes}$$

The answer in the book is not correct.

(2) We have 18518.4 grains. But 15.432 grains are given as equal to one gram. Therefore

$$18518.4 \div 15.432 = 1200.$$

\* From the data given in Part III of Kennedy and O'Hearn's Arithmetic the correct answer is 1200 grams and not 1199.9728 as in the book answer.

(3) For Ex. 11, page 43, Kennedy and O'Hearn's Arithmetic, the correct answer is 10 ac. 65 sq. rds, 16 sq. yds., 4 sq. ft., 136 sq. in.

SUBSCRIBER.—On the map of South Africa we find the words "fontein" and "dorp" used several times, in such words as Elandsfontein, Bloemfontein, Magersfontein, etc. Klerksdorp, Ventersdorp, Krugersdorp, etc. In your next REVIEW please give the meaning of these words; also describe "gun-cotton."

"Fontein" means a fountain or spring (Bloemfontein, the fountain of flowers). "Dorp" is a village (Krugersdorp is of course named in honor of President Kruger.) "Gun cotton" is an explosive substance obtained by subjecting common cotton to the action of strong nitric acid.