

DEAR SIR,—We are of the opinion that "Evening" as given on page 17 of the First Book, Part II., is not the correct rendering of it. We always looked upon it as a supplication. If, as has been said, there is nothing in the English language repeated so often, we think it should be repeated correctly, as given in the First Book:—

Now I lay me down to sleep,
I pray the Lord my soul to keep;
If I should die before I wake,
I pray the Lord my soul to take.

To our way of thinking it should be—

Now I lay me down to sleep,
I pray Thee, Lord, my soul to keep;
If I should die before I wake,
I pray Thee, Lord, my soul to take.

I.S.—Please give your opinion.

Yours truly,

J. RONN.

Washburn, Ont., July 30th, 1885.

1. A railway train moving with uniform speed is met and passed in 5 seconds by an engine 30½ feet in length and running 30 miles per hour; the engine returns and passes the train in 25 seconds after overtaking it. Find the length of train.

(Second-class, 1885).

2. A traveller on a train notices that 2½ times the number of spaces between the telegraph poles that he passes in a minute is the rate of the train in miles per hour. How far apart are the poles? (This question appears in the new arithmetic).

Any one giving solutions to these questions will oblige,

R. NESBITT, Woodville.

ANSWERS.

RODERICK DUH.—"Standard Time," is a term used to denote a conventional arrangement adopted two or three years since for the convenience of the railroads of the continent. As every school boy knows the revolutions of the earth on its axis causes a variation of time of about 4 minutes for every degree of longitude, or an hour for every fifteen degrees. In order to obviate the inconvenience caused in the case of railroads running in an easterly and westerly direction, by having a different time for every station, it has always been customary for the railroads to run their trains within certain limits by the time of some one town within these limits. Thus certain trains would be run by "Toronto time," "Montreal time," &c. The consequence was a greater or less difference between the railway time and the true local time of each station within those limits to which gave rise to mistakes and confusion. Under the "Standard time" arrangement all the places within fifteen-degree belts agree to adopt and use the same fixed time, instead of the true local time. In order to make "Standard Time" map for illustration all that is necessary is to take an ordinary map and draw distinct coloured lines corresponding with the lines of longitude at 60°, 75°, 90°, 105°, and 120° west from Greenwich. All the places lying within any one of the belts thus formed use a uniform time, which of course varies all the way from a second to an hour from the true time. For railway purposes the time between 60° and 75° is called "Intercolonial Time," from 75° to 90° "Eastern Time," from 90° to 105° "Central Time," from 105° to 120° "Mountain Time," and from 120° to westward "Pacific Time."

J. M. N.—Brown University, Rhode Island; Williams' College, Williamstown, Mass.; Bates, College, Lewiston, Maine; Cornell University, Ithaca, New York; Amherst College, Amherst, Mass.; Tuft's College, College Hill, Mass.; Colby University, Waterville, Maine; Hamilton Theol. Seminary (Bap.) and Madison University, Hamilton, N. Y.; Rochester Theological Seminary, (Baptist), Rochester, N. Y.; Richmond College, Richmond, Virginia.

S. T. HOPPER.—We have not at hand the particulars of the case referred to. Perhaps some correspondent will kindly furnish them. Such an action if taken would no doubt be taken under Sec. 159 of the Consolidated School Act which provides that "every qualified teacher of a public school employed for any period not less than three months shall be entitled to be paid his salary in the proportion which the time during which he has taught bears to the whole number of teaching days in the year." This is one of the new sections added last session of the Legislature.

J. RONN.—The true rendering will remain, we suppose, a matter

of opinion. The verse is clearly intended as a supplication, but supplications are sometimes expressed in the third person, as e.g. in the twentieth Psalm. The accent, or metro, favors the rendering given in the First Book, but the prayer seems certainly more natural and expressive, when the second person is used, as by our rendering. On the principle, generally a safe one, that in such a case, meaning is more important than form, sense than sound, we should be inclined to agree with your view.

The following are solutions to the questions asked in THE SCHOOL JOURNAL, of July 30th.

1. No. 3 by a subscriber.

Solution. The amount of a \$1 instalment paid at end of one year for remaining 9 years, would be \$1 54

Amount of \$1 interest for 9 years=	\$1 48
" " 1 " " 8 "	= 1 42
" " 1 " " 7 "	= 1 36
" " 1 " " 6 "	= 1 30
" " 1 " " 5 "	= 1 24
" " 1 " " 4 "	= 1 18
" " 1 " " 3 "	= 1 12
" " 1 " " 2 "	= 1 06
" " 1 " " 1 "	= 1 00

Total..... \$12 70

Amount of \$1,000 for 10 years, at 6%=\$1600

\$12.70 shows each instalment to be \$1.

\$1600 " " " \$1600.

\$12.70

= \$125.98

The following were asked by "Ignoramus":—

1. Let y =sculler's rate

" x =bargo's rate.

$$b \cdot a - b$$

(1)

$$\frac{a}{b} = \frac{a-b}{x}$$

$$\frac{b}{y} = \frac{a-b}{x}$$

$$bx = ay - by.$$

(2)

$$\frac{a \cdot b^2 - a}{b^2} = \frac{a}{x}$$

$$\frac{b^2}{y} = \frac{b^2 - a}{x}$$

$$\frac{b^2}{y} = \frac{b^2 - a}{x}$$

$$\frac{b^2 x = b^2 y - ay}{y} = \frac{b^2 x = b^2 y - ay}{y}$$

$$\left\{ \begin{array}{l} (1) \quad bx = ay - by \\ (2) \quad \frac{a \cdot b^2 - a}{b^2} = \frac{a}{x} \end{array} \right.$$

Multiply (2) by b , and (1) b^2 , and subtract,

Then $2b^2 = ab + ab^2$.

Divide both sides of this by abb^2

$$\frac{2}{a} = \frac{1}{b^2} + \frac{1}{b}$$

2. Let x =rate per second of one.

" y =" " " other.

Sum of lengths = ½ mile.

$$(1) \quad 1\frac{1}{2} \text{ sec.} = \frac{3x}{2} + \frac{3y}{2} = \frac{3}{2} "$$

$$(2) \quad 6 \text{ sec.} = 6x - 6y = \frac{3}{2} "$$

$$\text{Multiply (1) by 4} = 6x + 6y = \frac{3}{2} "$$

$$\text{Add (2) and (1) } \therefore 12x = \frac{3}{2} "$$

$$x = \frac{3}{8 \times 12} "$$

$$= 50 \text{ miles per hour,}$$

$$\text{and } y = 30 "$$

3. Let x =part unchanged.

Then $100,000 + x$ =number.

But if x be put in the "tons" place, and 1 in the "units" place, the number will be $10x + 1$, and this is $= 3(100,000 + x)$

$$\therefore 10x + 1 = 300,000 + 3x$$

$$\text{and } x = 42,857$$

$$100,000 + 42,857 = 142,857$$

R. NESBITT, Woodstock.

QUESTIONS, 2ND JULY.—NO INQUIRER.

No. 6. Three men and 2 boys do as much in 2 days as 5 boys in 6 days; and do three times as much in 6 days,

$$\therefore 3 \text{ men do twice as much as } 36; 1 \text{ man} = 2 \text{ boys. Boy } 64; \text{ man, } 32.$$

No. 7. One woman does as much in 6½ days as 2 women and 36 boys in 2½ days. The latter do 17 times as much as former in same time.