Question Drawer.

QUESTIONS.

We have received queries from a number of correspondents. As in several cases these cover substantially the same ground, we have to save space, condensed the whole into the following :—

1. Is there to be an entrance examination next December ?

2. What literature is prescribed for the next entrance examinations ? What changes in other subjects ?

3. What literature is prescribed for third and for second-class teachers' examinations for July, 1886 ?

4. Is the promised book on Canadian and English History now ready ? If not when may it be looked for ?

5. Are quarterly payments now compulsory, and, if so, can I collect my salary this year quarterly, my agreement made in 1884 to the contrary notwithstanding ?

6. Are the Third and Fourth Readers of the new series now obtainable ?

ANSWERS.

1. Yes.

2. We will publish in full the requirements for entrance in our next issue.

3. This literature is not yet announced. Will be decided upon in a few weeks.

4. Not yet ready. The second part of this question can be answered only by a note of interrogation.

5. No. The agreement regulates the payment.

6. Yes, just out. Can be procured through the booksellers.

Solutions to problems sent by R. Nesbitt, Woodville.

1. When the engine and train travel in opposite directions the engine will not be past until they have together traveller a distance equal to the sum of their lengths ; when they travel in the same direction the engine will not be past till it has gained a space on the train equal to the sum of their lengths. In the first case the rate at which they pass each other is equal to the sum of their rates and in the second case the engine gains on the train at a rate equal to the difference of their rates. Hence

Rate of engine in ft. per sec. + rate of train in ft. per sec.
$$= \frac{\text{Length of train in ft.} + 30\frac{3}{5}\text{ft.}}{5}$$

And rate of engine in ft. per sec - rate of train in ft. per sec.
$$= \frac{\text{Length of train in ft.} + 30\frac{3}{5}\text{ ft.}}{25}$$

∴ Rate of engine in ft. per sec. $= \dfrac{3 \times \text{length of train in ft.} + 92 \text{ ft.}}{25}$

i.e. $\dfrac{30 \times 5280 \text{ ft.}}{3600} = \dfrac{3 \times \text{length of train in ft.} + 92 \text{ ft.}}{25}$

i.e. Length of train = 336 feet.

2. Rate of train in miles per hour. $= 2\frac{1}{4} \times$ number of spaces spassed per minute.

Rate of train in feet per min. $= 2\frac{1}{4} \times$ number of spaces passed per min. $\times 5280$ ft. $\div 60$.

$= (198 \times$ number of spaces passed per min.) ft.

i.e. number of spaces passed per min. contain $(198 \times$ number of spaces passed per min.) ft.

Hence a space contains 198 ft. or 66 yds.

JNO. SCOTT HARRIS,

August 14th.   Fergus H. S.

1. Let $x =$ rate of train in miles per hour. Then $x + 30 : 30 - x$ as 5:1, ∴ $x = 20$. Combined rates of train and engine $30 + 20 = 50$ miles per hour.

In 5 seconds, at 50 miles per hour, 366⅔ feet are passed over. 366⅔ – length of engine 30⅔ = 336 ft. the length of train.

2. Suppose rate of train to be 60 miles per hour. Then the number of spaces passed per min. $= \frac{80}{60}$, which also = number of spaces in a mile.

∴ 1 space $= 5280 \div \frac{80}{60} = 66$ yards.

J. H. CLARY. Tuscarora.

Literary Review.

KINDERGARTEN CHIMES, FRESH FLOWERS, AND SONG GREETINGS. *(Oliver Ditson & Co., Boston)*. "Kindergarten Chimes," by Kate Douglas Wiggin, of the California Kindergarten Training School, San Francisco, is a book of songs that will be welcome by all teachers of kindergarten and primary schools. Besides the "game" songs, which are sung with appropriate gesture, there are various songs suitable to times or events, such as songs for Christmas, Rain, or Sunshine, &c., all of which are arranged with an easy, yet effective, pianoforte accompaniment. Some excellent practical suggestions to kindergarteners are also given, and "The Story of Christmas," by Nora A. Smith, is given in attractive form. "Fresh Flowers," by Emma Pitt, is the title of a song-book for the infant classes of Sunday schools, neatly illustrated, and contains 64 pages. The airs are simple and melodious, and cannot fail to be attractive and easily learned and remembered. They are arranged in four parts for piano or organ accompaniment. "Song Greeting for High Schools," by L. O. Emerson, is a collection of music for High and Normal Schools, containing a great variety of solfeggio and vocal studies, together with three and four-part songs, glees, choruses anthems, and selections for devotional purposes. The author is so well known as a popular composer, especially of music suitable for schools, that it is unnecessary to mention more than that " Song Greeting " contains a selection equal to, if not decidedly in advance of, any of his previous productions. We heartily commend the book to the notice of leaders of musical societies in our High Schools and Collegiate Institutes.

INDIAN LOCAL NAMES WITH THEIR INTERPRETATION. By Stephen G. Boyd, Pa. Published by himself, and for sale only by himself and his special agents. Price $1.00, including postage. No one not utterly destitute of literary taste can fail to be interested in the subject matter of this interesting work. The author very frankly and modestly disclaims al credit, except that which belongs to a careful compiler, observing that if we were to wait for a work of this kind to be prepared by a scholar acquainted with the score or more of Indian languages and dialects from which these names are derived, this generation is not likely to see such a book. We see no reason to doubt that the author has, as he claims, "sought the very best sources of information, both in books and living persons," conscientiously indicating doubtful and rejecting unauthenticated definitions. The work cannot fail to be helpful to the live teacher.

THE ANNUAL ANNOUNCEMENT OF THE DOMINION BUSINESS COLLEGE AND PENMANSHIP INSTITUTE of Kingston is a handsome pamphlet, illustrated with fine cuts of interior and exterior of building. The staff of this college is a strong one, and its course and methods of instruction seem thorough and at the same time eminently practical. So far as we are aware, the facilities afforded for acquiring a useful business training are first-class.

BOOKS RECEIVED.

ANNUAL ANNOUNCEMENT OF TRINITY MEDICAL COLLEGE, Toronto In affiliation with the University of Trinity College and the University of Toronto, and specially recognized by the Royal College of Surgeons of England, the Royal College of Physicians of London, the Royal College of Physicians and Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the King's and Queen's College of Physicians of Ireland, and by the conjoint Examining Boards in London and Edinburgh.

THE SONG BUDGET. A collection of songs and music for schools and educational gatherings. Compiled by E. V. DeGraff, A.M. 4to, pp. 76, *(Syracuse, N.Y.: C. W. Bardeen. 15c.)*

CÆSAR'S GALLIC WAR. Seven books. Edited by J. H. and W. F. Allen and J. B Greenough. Revised with notes and dissertations. Fully illustrated on Cæsar's Gallic Campaigns and the Roman Military Art, by H. P. Judson, Principal High School, Troy, N.Y. *(Boston: Ginn & Co.)* Price by mail, $1.35.

THEORY AND PRACTICE OF TEACHING By the Rev. Edward Storing, M.A., Head Master of Uppingham School, late Fellow of King's College, Cambridge. New and revised edition. (Williamson & Co., successors to Willing & Williamson, Publishers, Booksellers, Stationers, and Importers 5 King street west, Toronto.)