Who whispered? Why far-heard? Explain fully by a paraphrase.

"From the sails the dew did drip."—Part III., 66.

Why was there so much dew? Why were they parched with thirst when there was so much dew?

"I looked upon the rotting sea . . .
I looked upon the rotting deck."—Part IV., 17-19.

Why is the sea called rotting? Why is the deck called rotting, remembering that in the 32nd line it is said, "nor rot nor reek did they"? Is the sea called rotting because *"the corruption of death was begun to ferment with new forms of life? While the great body as a whole was torpid and passive, every separate member began to feel with a sense, and to move with an energy all its own."

"Her beams bemocked the sultry main."—Part IV., 44.

What is the meaning of bemocked? its subject? beams or main? With either construction, explain the exact meaning.

"An orphan's curse would drag to hell
A spirit from on high."—Part IV., 34-35.

Does the Ancient Mariner mean to say that he is under an orphan's curse? Paraphrase these and the two succeeding lines.

J. S. C.

Please furnish arithmetical solutions for the following:—1. In what time can a column of men clear a defile 3 miles in length, supposing this column to consist of 10 battalions, each extending over 176 yards, and that the rate of marching over the last mile is reduced on account of the difficulty of the road, from 75 paces of 2½ feet each, to 40 paces of 2¾ feet each per minute?

(Matr. Victoria Col., Sept. 1881.)

2. I invest $5,592 in the new three per cents at 87¼, and if I sell out at the end of 3 months at 90, after having received one-half year's dividend, what sum, including interest, shall I have gained; the brokerage being 25s. 6d. per cent. on the investment as well as on the rate of stock, and the income tax on the dividend being 4 d. in the £?

(Ibid.)

3. What is the cost price of cloth per yard when 6 yards more for $1.05 lowers the price 2½ cents per yard?

4. How long will it be before $2,500 put out at Compound Interest at 10% per annum will obtain to $1,727.58¾ as interest?

5. What helps to form a complete Predicate in "Where are they"?

ANSWERS.

In answer to Student in No. 37.

Solve. $x^2+y=7$ (1).
$x+y^2=11$ (2).

First Solution. By adding (1) and (2) $x^2+x+y^2+y=18$

$\therefore x^2+x+\frac{1}{4}+y^2+y+\frac{1}{4}=18+\frac{1}{4}+\frac{1}{4}$

$=\frac{74}{4}=9^2+\frac{2^2}{4}$

$(x+\frac{1}{2})^2+(y+\frac{1}{2})^2=(\frac{9}{2})^2+(\frac{2}{2})^2$.

Each side being the sum of two squares it only remains to find to which the $(\frac{9}{2})^2$ belongs. The square of x added to y gives a smaller number than the square of y added to x. It is evident therefore that $x<y$, or thus

$x^2+y<y^2+x$
$\therefore x^2+y-(x+y)<y^2-x-(x+y)$
$\therefore x^2-x<y^2-y \quad \therefore x<y$

Hence $(x+\frac{1}{2})^2=(\frac{9}{2})^2 \quad x=2$
$(y+\frac{1}{2})^2=(\frac{9}{2})^2 \quad y=3.$

Second Solution. $x=11-y^2$
$x^2=121-22y^2+y^4$

Substituting this in the first Equation we get

$y^4-22y^2+y+114=0$
$y^4-3y^3+3y^3-9y^2-13y^2+39y-38y+114=0$
$y^3(y-3)+3y^2(y-3)-13y(y-3)-38(y-3)=0$
$(y-3)(y^3+3y^2-13y-38)=0$

Hence, $y-3=0$; $y=3$, &c.

Third Solution. $x^2+y=7$, or $y-3=4-x^2$ (1)
$y^2+x=11$, or $y^2-9=2-x$ (2)

That is to the unknown squares are attached the largest squares found in the unknown quantities.

$4-x^2=(2+x)(2-x)$; hence from (1) we have

$\frac{y-3}{2+x}=2-x=y^2-9$ (3)

or $y^2-9=\frac{y}{2+x}-\frac{3\frac{1}{2}}{2+x}$

$\therefore y^2-\frac{y}{2+x}=9-\frac{3}{2+x}$ Solving as a quad.

$y^2-\frac{1}{2+x}\cdot y+\left\{\frac{1}{2(2+x)}\right\}^2=9-\frac{3}{2+x}+\frac{1}{4(2+x)^2}$

$y-\frac{1}{2(2+x)}=3-\frac{1}{2+x} \therefore y=3, \&$

Fourth Solution. $x^2+y=7$ (1)
$x+y^2=2$ (2)

Subtracting (1) from (2) we get $x+y^2-x^2-y=4$, or $(x-y)-(x^2-y^2)=4$, or $(x-y)(1-x-y)=4$.

Now since (vide 1st Solution) $x<y$, $x-y$ is negative, therefore 4 is the product of two negative quantities, and they cannot be equal, for let $x-y=1$ $x-y$, and we get $x=\frac{1}{2}$, which value does not satisfy the equations. 4 must be the product of two negative unequal factors; -1 and -4 are the only two such integral factors found in 4.

$\therefore (x-y)(1-x-y)=-1\times-4.$

Then by trial we find $x-y=-1$; $1-x-y=-4$.
From which $x=3$, $y=2$.

The three first solutions are from Gage's School Examiner, I think, the last is my own, and consequently I have some doubt in offering it.

J. S. C.

NOTE.—Queries from "Excelsior," "Subscriber," C. S. E., G. H., J. D. B., and others are crowded out this week. They will appear in next issue.

Our friends are invited to send answers to questions that are published in this department. Doing so will improve themselves and be a benefit to others. They are left unanswered by the Editor for that purpose.

* Macaulay.—Lord Clive, § 19.

Literary Chit-Chat.

Ginn & Co., Boston, will publish about December 1st, a translation of Hermann Lotze's "Outlines of Psychology." The translation is by Prof. Ladd, of Yale. This volume will be fourth in the series, the "Metaphysic," "Philosophy of Religion," and "Practical Philosophy," having already appeared.

The *North American Review* is following the sensible example of *The Century*, in falling back so as to make the issue correspond with the date. The December number is to be issued on the 25th of November, and henceforward the magazine will appear on the first day of the month of which it bears date.

The Life and Letters of John Brown, Liberator of Kansas and Martyr of Virginia, is a large volume of more than 600 pages, edited by F. B. Sanborn, and published by the Roberts Brothers, Boston. Twenty six years ago John Brown was executed as a felon at Charlestown, Virginia.

The American Tract Society has recently published an interesting book on home life in China.

It is said that Mr. F. T. Palgrave will be the candidate for the professorship of poetry at Oxford, formerly held by Matthew Arnold and Professor Sharp.

Matthew Arnold's "Discourses in America," recently published by Macmillan & Co., consist of his lectures on "Numbers," on "Literature and Science," and on "Emerson." The first and last were written specially for America.

Edward Eggleston is with his family at a little town in Canton Vand, Switzerland.

Contrary to previous rumors, the *Athenæum* states, that Lord Tennyson's forthcoming volume will consist almost entirely of new poems, some of them of considerable length.

It is reported that Mr. Howells, in addition to placing all his new writings at the disposal of the Harpers, is beginning with the January number, to edit an Editor's Study, or Literary Column, for Harpers' Magazine.

"The Future of the Struggle for India," is the title of a book which has been published in Paris. The author is Prof. Armenius Vambery, an authority on Asian questions.

The biography of Louis Agassiz, which has just appeared, shows that the great Nationalist was to the end of his life a steadfast opponent of the theory of evolution. His belief in the Creator was, his biography says, the keynote of his study of nature.