

NOTE.—If the middle term had been $-1952126x$, the solution would be effected simply by adding $81x^2 - 162x + 81$ to both sides, whence $988x - 988 = \pm(9x - 9)$. We suspect some error in the question, as there would seem no object in setting a tedious mechanical operation on a paper of this kind.

5. (b) $x(x+1)(x+2)(x+3) = \frac{9}{8}$
 $(x^2+3x)(x^2+3x+2) = \frac{9}{8}$. Put $y = x^2+3x$, and
 $16y^2+32y-9=0$
 $16y^2+36y-4y-9=0$
 $(4y-1)(4y+9)=0$, $\therefore y = \frac{1}{4}$ or $\frac{9}{4}$

Putting x^2+3x equal successively to these two values we get the four values of x required.

5. (c) Square all the equations as they stand.

(I)² = $x^2(1-y^2) + y^2(1-x^2) - 2xy\sqrt{(1-y^2)(1-x^2)} = \frac{1}{4}$
 (II)² = $x^2y^2 + (1-x^2)(1-y^2) - 2xy\sqrt{(1-x^2)(1-y^2)} = \frac{1}{4}$
 $\therefore x^2+y^2 - 2x^2y^2 - 2xy\sqrt{(1-x^2)(1-y^2)} = \frac{1}{4}$
 $-x^2-y^2+2x^2y^2 - \dots = \frac{1}{4}$

$2(x^2+y^2-2x^2y^2) = 0 \therefore x^2+y^2 = 2x^2y^2$ (A)

Square II and transpose and $x^2+y^2 = xy + \frac{1}{4}$ (B)

$\therefore 2x^2y^2 = xy + \frac{1}{4}$, a quadratic of the form,

$8m^2 - 4m - 3 = 0$, $\therefore xy = \frac{1}{4}(1 \pm \sqrt{47})$. Combining this with A the numerical values of x and y result.

6, 7, 8. Easy book-work.

The Question Drawer.

In discharging a gun, at what time does it recoil, before or after the charge leaves it? In either case, what causes the recoil?—ENQUIRER.

From the replies received to questions in specimen number we select the following:—

1. Lord Bacon. When Lord Chancellor Bacon was accused of receiving bribes, and was heavily fined, but the firm was afterwards remitted. Late historians and biographers, notably Hepworth, Dixon, have shown pretty clearly he was innocent of intentional wrong doing. Pope's "Essay on Man."—J. M.

3. Glycerine and nitric acid. It is mixed with clay or something else to give it consistency. *Dunamis*, Gr., power.—J. M.

4. Mason, in paragraph 63, says: "Compounds in which the fusion of the two parts is complete, have the 's' at the end; as, handfuls, rosetrees. Angus' "Hand-book of English Tongue," page 175:—"When the words are so closely allied that the sense is extremely incomplete till the whole are added, the 's' is at the end; as, pailfuls, the three per cents." But the correct form may depend upon the shade of meaning: two different spoons full of something or two doses measured in the one spoon, or two different kinds of teas in two different spoons. In this last case perhaps either form would be correct.

5. Lost in the woods I turn to the right, it may be because I carry a gun on the right or step longer or stronger with one foot, probably the right.

To answer, as one correspondent does, to No. 2, "Why does a ten acre field require more fence when oblong than when square?" "Because it has a longer periphery," is not to give a reason, but to re-state the fact in other words.

Professor.—"If you attempt to squeeze any solid body, it will always resist pressure." Class smiles and recites examples of exception which prove the rule.

Why did the boy stand on the burning deck? Because it was too hot to sit down.

A new style of writing paper is called "Dude." A sort of fools cap, eh?

"What building is that?" asked a stranger, pointing to the school-house. "That," said the boy addressed, "why that's a tannery."

We work for the worst landlord on earth when we work for self; it is slavery. It is the grandest work on earth to work for others.—*New York School Journal*.

Miscellaneous Reading.

A TRIP TO EGYPT AND THE PYRAMIDS.

BY E. L. WELLS.

One morning in March, 1878, a small party of tourists left London for Egypt and Palestine.

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In the evening the gentlemen reached Paris, where I was stopping at the time. I made arrangements to go with them, and the next morning we took a train for Marseilles.

The journey across France is a delightful one:—Over beautiful lands, cultivated in strips, looking like innumerable gardens; along the grassy banks of the swift-running rivers, with many a busy mill; over the streams on iron bridges; through tunnels; by picturesque villages, with fine parks of trees and flowers, lawns and shrubbery; by and through tens of thousands of vines, on terraced hillsides and in the valleys; with snow-capped mountains in the distance; with cathedrals and castles here and there on hill and mountain top, their spires, turrets, and towers standing as sentinels over the valleys below: everywhere something new, something beautiful, something to make one forget the long, and otherwise tiresome journey, he is taking.

ON THE MEDITERRANEAN.

We spent a forenoon in Marseilles, and then left the city on the French steamer, *Arethuse*.

A dozen different nationalities were represented among our passengers. Upon deck were strange looking beings scattered about in every available place, several of whom were Arabs in quaint costume. One of them, an old person, wrapped in an enormous hood and cloak, chinked in an opening by one of the smoke-stacks, being the cause of this daily conundrum: "Is it a man or a woman?" and which remained unanswered to the end of the voyage.

At first we had a smooth sea, but toward evening it became rough and quite troublesome to passengers with undecided stomachs. A lingering on-the-fence sort of stomach is worse than a volcanic one, that is active at the first of the voyage and quiet the rest of the time.

Opposite me sat a corpulent priest in his black cap and gown. I thought he certainly has not that capacious stomach to be agitated by trifles, but before the second course was finished, he had left to meditate on the transitoriness of all earthly happiness. Even Leopold, who was en route with us to Naples, showed by actions which speak more truthfully than words, that sea-sickness has no respect for princes.

Our course had to be changed in the night, and instead of going between Corsica and Sardinia we found ourselves in the morning making for the north end of Corsica.

This island and Elba were seen during the day, which was a rainy one, and found almost every passenger sick and in bed, if he had a bed, for the poor fellows on deck crouched around the smoke-stacks and into chinks and corners as much as possible, trying to keep dry and warm. This night was a terrible one.

After this we had a smoother sea, and on the fifth day from Marseilles we passed Stromboli, Scylla, Charybdis, and Mt. Etna. The smoke of Stromboli rested upon it, as if one cone were placed upon the frustum of another. Scylla, said in heathen mythology to have been a beautiful nymph, transformed into a roaring and voracious sea-monster by the jealousy of Circe, is a high rock on the coast of Italy. On its summit is a castle, and on each side a sandy bay. Two huge rocks extending into the sea are called the