clined to the lines of action of the 6 lb. and the 4 lb. forces.

3. (b) 240 lbs.   4. $1\frac{1}{2}$ inches.

5. $\frac{1}{2}\dfrac{r_1{}^2 + 3r_2{}^2 + 5r_3{}^2 + \cdots (2n-1)r_n{}^2}{r_1{}^2 + r_{22}\ r_{32} + \cdots\ + r_n{}^2}$h,

6. 1.027.

ARITHMETIC, SECOND CLASS.

1. £2 0s. 6d.   2. $24\frac{65}{203}$ cents.

3. $451.20 ; $12.   4. $9,500 , $16,200.

6. $2,190.   7. 116 lbs. ; 136 lbs.

8. Either method gives $1,610.51.

9. $\begin{cases} 75 \text{ cents } ; 12\frac{1}{2}\text{cts.} \\ \$1.00 ; \quad 10 \text{ cts.} \end{cases}$ 10. $\begin{cases} (a)\ 63\frac{3}{4} \text{ feet.} \\ (b)\ 50 \text{ feet.} \end{cases}$

ARITHMETIC, THIRD CLASS.

1. $\frac{71}{100}$.   2. .1, 2.72637.   3. $\frac{817}{1600}$.

4. $4 60.   5. $360.   6. $119.79 †.

7. $260.   8. $6\frac{1}{4}$, 15 years.   9. $2,480.

10. $1,732.50.

ALGEBRA, SECOND CLASS.

1. $(1+m)\ x - (1-n)\ y$.

2. $(x-y)\ (x+y)^3 , \ (a-b)\ (b-c)\ (c-a),$
   $(5x^2 - 1)\ (5x + x + 1.)$

3. Given in question.

4. $x-1,\ 1 + x^{\frac{1}{2}}.$

5. $(x+y-z)\ (x-y+z)\ (y+z-x)$

$\left\{ \dfrac{(x+y+z)^3}{\dfrac{1}{a-b}} \right.$

6. $-\frac{2}{3},\ 1.$

7. $a''(b'c-bc') + b''\ (ac'-a'c) + c''(a'b-ab') = 0.$

8. $\left\{ n^2 - \left(\dfrac{m^3 - 2n}{3} \right)^3 \right\} \frac{1}{2} ;\ 2, 3, 4.$

9. $\dfrac{a(c-b)}{a-b},\ \dfrac{b\ (a-c)}{a-b}$

10. Three miles an hour.

11. (a) Demonstration.
    (b) 2,000.
    (c) Demonstration.

EDITOR'S DRAWER.

NEW INK WEL .—We have before us a sample of a new metallic ink well manufactured by W. Bryce, London, Ontario. It is guaranteed to be non-corrosive by ink, and is sold, we believe, at $6 per 100. We see no reason why it should not give excellent satisfaction.

PERSONAL.—Most of our readers already know that J. C. Glashan, Esq., late Inspector Division No. 1, Middlesex, and editor of our TEACHER's DESK has been appointed Inspector of Public Schools, for the City of Ottawa. Mr. Glashan is well qualified for the duties of the important office to which he has been appointed, and while regretting his departure, we cordially wish him success in his new sphere of labor. We have his promise that as soon as possible, after getting settled in Ottawa, he will bring up arrears on the "Desk."

EXAMINATION QUESTIONS.—In this No. we give the Examination Questions at the recent County Board Examinations in full, with one exception, the music paper. We had intended to give a part this month, and the remainder in September, but on second thoughts considered that it would be decidedly better and more convenient for teachers to have all in one No. This must be our apology for crowding out much interesting educa-

tional intelligence, and other matter. We hope to be able to give solutions in future issues.

A LIBERAL OFFER.—We have completed arrangements to club the TEACHER, with *Our Home Companion*, a monthly journal published in London, Ontario, and can now offer the two on exceedingly favorable terms. The *Home Companion* is an excellent magazine, brimfull of choice reading matter, and the publishers give away to every subscriber a premium crayon, worth many times the price of subscription. These crayons are very superior works of art, printed on heavy Bristol cardboard, size 22 x 28 inches, and there are six different subjects to choose from. The following are the subjects : " Love is as a Thread " ; " Yes or No "; " Gathering Ferns " ; " Going to Work " ; " The Offer " ; " Accepted." The price of the *Companion* is 50 cents per annum, and the Crayons are said by competent judges to be worth $1 each, but having been contracted for at a great reduction from wholesale, we are now able to make the following liberal offer, which will hold good during the month of August : For $1.50 we will send the TEACHER and *Companion*, (with crayon,) to any address, post-paid for one year. This very liberal offer should bring a large accession of subscribers.