

## QUESTION DEPARTMENT.

"M." Shelburne Co.—1. "Premium on normal school training equal to one grade in class of license." Does this refer to those who have already passed examination? For instance, two teachers obtained B license two years ago; one teacher attended the normal school, the other did not. Is the former to receive what has been considered as "B" provincial grant, while the latter receives only the portion allotted to the holders of a "C" license obtained at the normal school?

ANS.—All licenses of the same grade obtained in Nova Scotia in the past entitle to the same privileges whether supplemented by normal school training or not. The normal school diploma of the past brings to its holder no direct pecuniary advantage. Hereafter, those who pass only the grading examination will receive a license one grade lower. For example, a candidate passing the government examination for grade "B" will receive only a "C" license unless he also passes the professional examination of the normal school, in which case he will receive a "B" license without further examination. If a candidate receives a grade "C" at the government examination, there are two ways in which he can proceed to take a "C" license. 1. He may go to the normal school and get a professional training, or, 2. He may go to a county academy and pass for grade "B," and thus get a "C" license. Therefore, a normal school training may be regarded as equal to one grade in scholastic attainment.

A SUBSCRIBER, Yarmouth.—Will you kindly give in the next issue of the REVIEW a set of questions on drawing similar to what will be required of candidates for grade "C." By so doing you will oblige.

1. Describe the construction and uses of set-and-T-squares.
2. Construct a diagonal scale of  $\frac{3}{4}$ " to 1 yard to measure yards, feet and inches.
3. State the angles made by the hands of a clock at 1, 2.30 and 6.30.
4. Construct a triangle the altitude =  $1\frac{1}{2}$  in., the base angles =  $30^\circ$  and  $45^\circ$ .
5. Construct an equilateral triangle, the altitude AB ( $2\frac{1}{4}$ " being given.
6. In the triangle ABC let BD be the perpendicular on AC. Given AB =  $6\frac{1}{2}$ ", AC =  $4\frac{1}{2}$ " and BC = 3", How long is CD?
7. Explain the terms "overlap," "axis of symmetry," "trefoil," "elevation."
8. Draw from memory a rosebud with two or three leaves connected with it.
9. Give an illustration of the acanthus as conventionalized in Greek art.
10. Draw an original design based upon the leaf of the ordinary blue violet.
11. Draw an outline figure of any ordinary domestic animal.
12. Make a drawing of your own hand half the natural size.

Please solve example 4, V., page 104, Kirkland & Scott's arithmetic; also example 24, page 153 of the same

1. The product of  $7\frac{1}{2}$  by 8 is  $59\frac{1}{2}$ , which, taken from 60, leaves  $\frac{1}{2}$ . Subtract  $\frac{1}{2}$  from 60 and there remains  $59\frac{1}{2}$ , which contains  $7\frac{1}{2}$  exactly 8 times.

2. 7 men and 5 women do  $\frac{1}{4}$  in 1 day,

3 " " 8 " " "  $\frac{1}{11}$  " "

Multiply by 3 and 7.

We have 21 men and 15 women do  $\frac{1}{4}$  in 1 day,

21 " " 56 " "  $\frac{1}{11}$  " "

Therefore, 41 " "  $\frac{1}{11} - \frac{1}{4}$  " "

41 " "  $\frac{1}{11}$  " "

1 woman does  $\frac{1}{11}$  " "

Therefore 7 men do  $\frac{1}{4} - \frac{1}{11} = \frac{1}{44}$  " "

1 man does  $\frac{1}{44}$  " "

1 man and 1 woman do  $\frac{1}{44} + \frac{1}{11}$  " "

1 " " 1 " "  $\frac{1}{11}$  " "

or 1 " " 1 " " all in  $16\frac{2}{3}$  days.

PAUL FORD, (C. B.)—Please solve (1) Ex. 2, Section II., page 216, Hamblin Smith's arithmetic; (2) Ex. 339, page 292; 3; (3) On May 21st a broker purchased for me \$12,000 6 per cent bonds at  $104\frac{1}{2}$ , the interest on these bonds payable on 1st February and August. After receiving interest on August 1st, the broker sold bonds for me at  $103\frac{1}{2}$ , charging  $\frac{1}{4}$  per cent for selling. What did the bonds cost me, the brokerage being  $\frac{1}{4}$  on the market value? Did I gain or lose, and how much, money being worth 5 per cent?

(4) Draw a chord cutting two concentric circles so that the part within the smaller circle may be half the chord.

(5) If from any point in an equilateral triangle perpendiculars fall on the sides, prove their sum equal to the perpendicular from one of angular points on opposite side.

(6) Analyze: (a) Tell her that wastes her time, that now she knows, when I resemble her to thee, how sweet and fair she seems to be.

(b) It is sweet to visit the silent wood.

1. If payment be made at end of 6 months, \$90 is accepted for \$100 worth of goods. If at the end of 3 months, that is 3 months before the end of 6 months, the present worth of \$90 for 3 months should be accepted. If at the end of 9 months, that is 3 months after the end of 6 months, the amount of \$90 for 3 months should be accepted.

Present worth of \$90 for 3 months at  $5\%$  = \$88 $\frac{1}{2}$

Amount " " " " = 91 $\frac{1}{2}$

Therefore discount in first case is  $100 - 88\frac{1}{2} = 11\frac{1}{2}$

And " second "  $100 - 91\frac{1}{2} = 8\frac{1}{2}$

2. See EDUCATIONAL REVIEW for February, 1893.

3. Cost of a \$100 bond =  $104\frac{1}{2} + \frac{1}{4} = \$105\frac{1}{4}$ .

Cost of \$12,000 bonds =  $105\frac{1}{4} \times 120 = \$12405$ .

Therefore he received \$210 less than he gave for the bonds. But half-yearly dividend =  $3\%$  of \$12000 = \$360. Apparent gain is \$360 - \$210 or \$150. Now he invested \$12615 from May 21st to August 1st.

On this interest =  $\frac{\$12615 \times 72 \times 5}{365 \times 100} = \$124.42$ .

Therefore his actual gain is  $\$150 - \$124.42 = \$25.58$ .

4. From A, the common centre, draw a radius ABC cutting the smaller circle in B. Produce AC