JULY EXAMINATIONS, 1879.

SECOND CLASS TEACHERS AND INTERMEDIATE.

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1. (a) Divide 84.832476 by 12.734.

(b) The circumference of a circle divided by **3.1415926 gives** the diameter nearly; what multiplier of five decimal places may be used instead of this divisor?

2. Show how to find the G.C.M. and the L.C.M. of two or more fractional numbers.

The G.C.M. of two fractional numbers is 1_{100}^{10} , and their L.C.M. is $34\frac{1}{3}$; one of the numbers is $2\frac{1}{3}$, find the other.

3. Sterling exchange is quoted in Toronto at 1091 for 60-day bills; what must be paid for a 60-day bill for £45 8s. 6d.?

4. The old wine gallon is 231 cubic inches; the cubic inch is .000016386 cubic metres, and the imperial gallon is 4.54102 litres; he w many imperial gallons are there in 157 wine gallons?

5. There are two clocks, one of which loses 8½ minutes a day, and the other gains 8½ minutes a day; the latter marks a time 25 minutes in advance of the former: when will both clocks mark the same time?

6. A person had stock of the Dominion Bank; he received a half-yearly dividend of 41 per cent., which he invested in the same stock at 1133, and his entire stock was now \$16,600; how much stock had he at first?

7. If 5 men earn as much in a day as 8 women, and 2 women as much as 3 boys, and if 7 men, 12 women, and 20 boys earn \$205.50 in 6 days, what amount will be earned in 8 days by 6 men, 10 women, and 24 boys?

8. If 12 lbs. avoirdupois of American standard silver, which is 90 per cent. fine, be coined into 175 dollars; and if the value of the alloy be 371 per cent. of that of pure silver, find the value of one pound Troy of the alloy.

9. A merchant imported 700 yards of silk and marked it to gain, as he supposed, 25 per cent.; but having neglected to take into account a charge of \$125 for freight and duty, he made only 6_{1} per cent. profit: find the invoice price of the silk.

- 10. (1) How many yards of painting are there in the walls of a room 20 ft. long, 14 ft. 6 in. wide, and 10 ft. 4 in. high, allowing for a fire-place 4 ft. by 4 ft. 4 in., and two windows each 6 ft. by 3 ft. 2 in.?
 - (2) Find the number of cubic feet in a hollow cylinder, the external circumference of which is 5 ft. 6 in., the internal circumference 3 ft. 8 in., and the length 18 feet.