

EASY QUESTIONS IN MENTAL ARITHMETIC.

1. To how many girls can you give a seventh part of four and a half oranges?
2. What is the difference between the square of 15 and the square of 16?
3. What is the difference between 3 square inches and 3 inches square?
4. Five times a certain fraction makes the number 3. Find the fraction.
5. A boy can walk 320 yards in 4 mins. How long will he require to walk a mile?
6. How many lots of 5 acres each can be made out of a piece of land each side of which is a mile?
7. From what number can 29 be taken away 29 times and then leave a remainder of 29?
8. What number bears the same relation to 24 inches that 125 miles bears to 100 miles?
9. Find the difference between '79 and '7900.
10. What is the area of a square room the perimeter of which is 76 feet?

SUGGESTIVE QUESTIONS FOR THE CLASS-ROOM.

1. What is the only bird that can see an object with both eyes at once?
2. From what is the hair-cloth used for furniture made?
3. What animal furnishes the most material for clothing?
4. What causes paper suspended from the ceiling of a heated room to move about?
5. What is the "Rhine of America?"
6. Why are the ends of the rails on a railroad not laid against each other?
7. From what do we obtain cloves and cinnamon?
8. How are brick, glass and lime manufactured?
9. Name some perfumes derived from animal sources.
10. Explain: Protective tariff, free trade, monopolies, syndicates, trusts, combines, commercial union.

ARITHMETICAL PROBLEMS.

1. The quotient is '0025, the dividend is '0003129, and the remainder '0000004; find the divisor. *Ans.* '125.
2. A piece of silk would be worth \$31.50 if it were $\frac{1}{3}$ longer. If the price per yard be 75 cents, find the number of yards in the piece. *Ans.* 39 yds.
3. A can do as much in 19 days as B can do in 17 days, and consequently receives 21 cents per day less than B; find the sum of their earnings for a month of 26 days. *Ans.* \$98.28.
4. When wheat is \$1.25 per bush, flour is worth \$6.00 per barrel. What should be the price of flour per barrel when wheat is \$1.00 per bush.—the cost of making a barrel of flour being 25 cents. *Ans.* \$4.85.
5. A grocer sells 15 pounds of tea and 8 pounds of coffee for \$11.25, receiving 17½ cents per lb. more for the tea than for the coffee; find the price of the tea per lb. *Ans.* 55 cents.
6. A grocer buys lemons at \$4.50 per case of 30 doz., and sells them at the rate of 3 for 5 cents; find his gain, allowing one lemon in every fifteen for waste. *Ans.* \$1.10.
7. One tap can fill $\frac{1}{5}$ of a cistern in 3 hours, a second tap can fill twice as much in the same time, and a third tap can empty $\frac{1}{25}$ of it in 30 minutes. If the cistern be empty, and all the taps opened at the same time, when will it be filled? *Ans.* Never.
8. A and B can do $\frac{2}{3}$ of a piece of work in 5½ hours, A and C can do $\frac{1}{2}$ of the remainder in $\frac{2}{3}$ hours, and A, B and C can finish it in $1\frac{1}{3}$ hours. In what time could A alone do it? *Ans.* 20 hours.
9. A rectangular field contains 17½ acres, and measures on one side 40 rods. Trees are planted 16½ feet apart around it on the outside. How many are there? *Ans.* 220.
10. A certain map is drawn on a scale of 20 miles to the inch. Find the value at 60 cents per acre of a piece of land represented on this map by a rectangle $\frac{1}{8}$ of an inch by $\frac{1}{4}$ of an inch. *Ans.* \$10,000.