

A Look at Dr. Johns Rice's Math Tests:

FOURTH YEAR

1. A man bought a lot of land for \$ 1743, and built upon it a house costing \$ 5482. He sold them both for \$ 10,000. How much money did he make?

2. If a boy pays \$2.83 for a hundred papers, and sells them at 4 cents apiece, how much money does he make?

3. If there were 4839 classrooms in New York City, and 47 children in each classroom, how many children would there be in the New York schools?

4. A man bought a farm for \$ 16,575, paying \$ 85 an acre. How many acres were there in the farm?

5. What will 24 quarts of cream cost at \$ 1.20 a gallon?

6. A lady bought 4 pounds of coffee at 27 cents a pound, 16 pounds of flour at 4 cents a pound, 15 pounds of sugar at 6 cents a pound, and a basket of peaches for 95 cents. She handed the storekeeper a \$ 10 note. How much change did she receive?

7. I have \$ 9786. How much more must I have in order to be able to pay for a farm worth \$ 17,225?

8. If I buy 8 dozen pencils at 37 cents a dozen, and sell them at 5 cents apiece, how much money do I make?

FIFTH YEAR

1. A man bought a lot of land for \$ 1743, and built upon it a house costing \$ 5482. He sold them both together for \$ 10,000. How much did he make?

2. If a boy pays \$ 2.83 for a hundred papers, and sells them at 4 cents apiece, how much does he make?

3. What will 24 quarts of cream cost at \$ 1.20 a gallon?

4. If I buy 8 dozen pencils at 37 cents a dozen, and sell them at 5 cents apiece, how much money do I make?

5. A flour merchant bought 1437 barrels of flour at \$ 7 a barrel. He sold 900 of these barrels at \$ 9 a barrel, and the remainder at \$ 6 a barrel. How much did he make?

6. How many feet long is a telegraph wire extending from New York to New Haven, a distance of 74 miles? There are 5280 feet in a mile.

7. A merchant bought 15 pieces of cloth, each containing 62 yards. He sold 234 yards. How many dress patterns of 12 yards each did he have left?

8. Frank had \$ 3.08. He spent $\frac{1}{4}$ of it for a cap, $\frac{1}{7}$ of it for a ball, and with the remainder bought a book. How much did the book cost?

SIXTH YEAR

1. If a boy pays \$ 2.83 for a hundred papers, and sells them at 4 cents apiece, how much does he make?
2. What will 24 quarts of cream cost at \$ 1.20 a gallon?
3. If I buy 8 dozen pencils at 37 cents a dozen, and sell them at 5 cents apiece, how much do I make?
4. A flour merchant bought 1437 barrels of flour at \$ 7 a barrel. He sold 900 of these barrels at \$ 9 a barrel, and the remainder at \$ 6 a barrel. How much did he make?
5. If a train runs $31\frac{2}{3}$ miles an hour, how long will it take the train to run from Buffalo to Omaha, a distance of 1045 miles?
6. If a map 10 inches wide and 16 inches long is made on a scale of 50 miles to the inch, what is the area in square miles that the map represents?
7. The salt water which was obtained from the bottom of a mine of rock salt contained 0.08 of its weight of pure salt. What weight of salt water was it necessary to evaporate in order to obtain 3896 pounds of salt?
8. A gentleman gave away $\frac{1}{3}$ of the books in his library, lent $\frac{1}{4}$ of the remainder, and sold $\frac{1}{2}$ of what was left. He then had 420 books remaining. How many had he at first?

SEVENTH YEAR

1. If a map 10 inches wide and 16 inches long is made on a scale of 50 miles to the inch, what is the area in square miles that the map represents?

2. The salt water which was obtained from the bottom of a mine of rock salt contained 0.08 of its weight of pure salt. What weight of salt water was it necessary to evaporate in order to obtain 3896 pounds of salt?

3. A gentleman gave away $\frac{1}{7}$ of the books in his library, lent $\frac{1}{6}$ of the remainder, and sold $\frac{1}{5}$ of what was left. He then had 420 books remaining. How many had he at first?

4. A farmer's wife bought 2.75 yards of table linen at \$0.87 a yard and 16 yards of flannel at \$0.55 a yard. She paid in butter at \$0.27 a pound. How many pounds of butter was she obligated to give?

5. If coffee sold at 33 cents a pound gives a profit of 10 per cent, what per cent of profit would there be if it were sold at 36 cents a pound?

6. Sold steel at \$27.60 a ton, with a profit of 15 per cent, and a total profit of \$184.50. What quantity was sold?

7. If a woman can weave 1 inch of rag carpet a yard wide in 4 minutes, how many hours will she be obligated to work in order to weave the carpet for a room 24 feet long and 24 feet wide? No deduction is to be made for waste.

8. A fruit dealer bought 300 apples at the rate of 5 for a cent, and 300 at 4 for a cent. He sold them at the rate of 8 for 5 cents. What per cent did he gain on the investment?

EIGHTH YEAR

1. If a map 10 inches wide and 16 inches long is made on a scale of 50 miles to the inch, what is the area in square miles that the map represents?

2. The salt water which was obtained from the bottom of a mine of rock salt contained 0.08 of its weight of pure salt. What weight of salt water was it necessary to evaporate in order to obtain 3896 pounds of salt?

3. A gentleman gave away $\frac{1}{4}$ of the books in his library, lent $\frac{1}{6}$ of the remainder, and sold $\frac{1}{3}$ of what was left. He then had 420 books remaining. How many had he at first?

4. A man sold 50 horses at \$ 126.00 each. On one half of them he made 20 per cent, and on the other half he lost 10 per cent. How much did he gain?

5. Sold steel at \$ 27.60 a ton, with a profit of 15 per cent and a total profit of \$ 184.50. What quantity was sold?

6. A fruit dealer bought 300 apples at the rate of 5 for a cent, and 300 at 4 for a cent. He sold them at the rate of 8 for 5 cents. What per cent did he gain on his investment?

7. The insurance of $\frac{3}{4}$ of the value of a hotel and furniture cost \$420.00. The rate being 70 cents on \$100.00, what was the value of the property?

8. Gunpowder is composed of nitre 15 parts, charcoal 3 parts, and sulphur 2 parts. How much of each in 360 pounds of gunpowder?