5. A hogshead of molases cost $20; for what ought it to be sold a gallon, to gain 40 per cent. on the cost?

6. B bought a horse for $80, and by selling it, lost 5 per cent. on the cost; for what did he sell it?

7. A wagon cost $140, and was sold for 5 per cent. less than it cost; for what was it sold?

8. A merchant, by selling 40 yards of cloth for $164, lost 20 per cent. on the cost. What did it cost per yard?

9. If a quart of brandy cost 50 cents, how must it be sold a gill, to lose 4 per cent.?

10. B lost 5 per cent. by selling a gallon of rum, which cost 80 cents; for what did he sell it a gallon?

Lesson XV.

1. What principal will, in 4 years, at 5 per cent., amount to $60?

Solution.—If the interest of $1 for 1 year is 5 cents, for 4 years it is 4 times 5 cents, or 20 cents. Therefore, $\frac{20}{100}$, or $\frac{1}{5}$ of the principal equals the interest; to which add $\frac{5}{5}$, the principal, and we have $\frac{6}{5}$ of the principal equal to the amount, or $60. If $\frac{6}{5}$ of the principal is $60, $\frac{1}{5}$ of the principal is $\frac{1}{6}$ of $60, which is $10; and $\frac{5}{5}$, (the principal), is 5 times $10, which are $50.

2. What principal will, in 3 years, at 6 per cent., amount to $118?

3. What principal will, in 5 years, at 6 per cent., amount to $130.

4. What principal will, in 7 years, at 5 per cent., amount to $81?

5. What principal will, in 9 years, at 8 per cent., amount to $86?

6. What principal will, in $3\frac{3}{4}$ years, at 8 per cent., amount to $260?