4. If $\frac{9}{30}$ of the cost equals the gain, what is the rate per cent?

5. If $\frac{3}{25}$ of the cost equals the gain, what is the rate per cent?

6. If $\frac{1}{25}$ of the principal equals the interest, what is the rate per cent?

7. If $\frac{1}{15}$ of the cost equals the gain, what is the rate per cent?

8. If the interest of $44 for 1 year is $4, what is the rate per cent.?

SOLUTION.—If the interest of $44 is $4, $\frac{4}{44}$, or $\frac{1}{11}$ of the principal equals the interest. Therefore, the rate per cent. is $\frac{1}{11}$ of 100 per cent., which is $9\frac{1}{11}$ per cent.

9. If the interest of $72 for 1 year is $6, what is the rate per cent.?

10. If the interest of $96 for 1 year is $12, what is the rate per cent.?

11. B bought a horse for $100 and sold it for $109, how much did he gain per cent.?

12. A woman bought a quantity of oranges for 75 cents and sold them for 34 cents; how much did she gain per cent.?

13. A merchant bought a quantity of books for $200, and sold them for $228; how much did he gain per cent.?

14. If by laying out $37, I gain a sum equal to $\frac{3}{5}$ of it, what do I gain per cent.?

15. Harvey bought a hogshead of molasses for $25 and sold it for $31½; how much did he gain per cent.?

16. Bought a knife for 37 cents and sold it for 57½ cents; what was the gain per cent.?

17. A stationer sold a quantity of paper for $\frac{5}{4}$ of what it cost him; how much did he gain per cent.?

18. James received for his horse $\frac{7}{5}$ of what it cost him; how much did he gain per cent.?