1. What is regarded as the base in all problems in profit and loss? in trade discount? in commission? in brokerage? in insurance? in taxes? in customs or duties? in interest? in bank discount? in true discount? in compound interest?

2. In the example, 8 is 4% of what number? what is the base? percentage? rate? Give the formula for the solution of this problem, using the letters *B*, *P*, and *R*.

3. In the example, What number increased by 20% of itself is 240? what is the amount? Give the formula for solution.

Give the formula for solving each of the following problems:

4. What is the loss on flour that cost $5 a barrel and sold at a loss of 10%?

5. A merchant sold cloth for 18¢ a yard which cost 16¢. Required the gain per cent.

6. What is the cost of goods which sell for $80, at a gain of 12½%?

7. What was the cost of a horse which sold for $400, at a loss of 25%? (*D* = difference.)

8. What is the commission for selling $500 worth of goods at 1½%?

9. What is the amount of sales when a commission of $40 is received at 2%?

10. Remittance, $2000; commission, 2%. Sum invested?

11. Commission, $80; sum invested, $4000. Rate?

12. Principal, $600; rate, 5%; time, 8 mo. Interest?

13. Interest, $6.70; time, 1½ yr.; principal, $100. Rate per cent?

14. Rate, 4½%; time, 2 yr. 3 mo.; interest, $80. Principal?

15. Amount, $600; discount, 6%; time, 4 mo. Present worth?

16. Face of note $450; time 4 mo.; rate 6%; proceeds?

17. Proceeds $380; time 60 da.; rate 7%; face of note?

18. What sum of money put at interest at 5% will amount to $1200 in 6 mo. 3 da.?

19. In what time will any sum of money put at simple interest double itself at 8%?