

## MISCELLANEOUS PROBLEMS

1. Kenneth solved a certain number of problems and Harold solved 2 more than twice as many. Together they solved 38. How many did each solve?
2. If 2 is added to a certain number, the result is the same as would be obtained if twice that number were subtracted from 32. What is the number?
3. Harry wished one summer to earn enough money for his next years expense in college, which would amount to \$1560. His father said, "For every dollar that you earn I will give you four dollars." How much must Harry earn?
4. During the summer Frank earned \$60 less than three times as much as his brother Fred. Together they earned \$1220. How much did each earn?
5. A grocer wishes to combine 75-cent candy with 50-cent candy to make 40 pounds of a mixture he can sell for 65 cents a pound. How much of each kind should he use?
6. A ship leaves a harbor sailing at 28 mph. A plane leaves 6-1/4 hours later. At what rate must it fly to overtake the ship in an hour and 15 minutes?
7. A man flew to another city for a meeting at the rate of 260 mph. Later he returned by train at the rate of 60 mph. If his total traveling time was 4 hours, what was his flying time?
8. Divide an estate of \$35,000 among three sons so that the second son gets \$5,000 more than the youngest, and the eldest twice as much as the youngest. How much does each get?
9. A certain kind of concrete contains twice as much sand as cement and 5 times as much gravel as cement. How many cubic feet of each of these materials will there be in 2000 cubic yard of the concrete?  
Hint: How many cubic feet in a cubic yard?
10. Find each man's share of the profits of a business if A receives twice as much as B, and B receives twice as much as C and the profits for the year are \$35,000.

## MISCELLANEOUS PROBLEMS (CONTINUED)

11. A's city tax was \$43 more than his state tax. His income tax was \$560. His total tax for these three amounted to \$815. How much was his state tax?
12. Seven boys and girls went into the corner drug store. Each boy got an ice cream soda at 30 cents, and each girl took a chocolate nut sundae at 35 cents. The bill was \$2.25. How many boys were there? How many girls?
13. A boy made 40 quarts of lemonade, which contained 20% lemon. How much water would he have to add to reduce it to 10% lemon?
14. For a certain football game the coach wants to start one sophomore and at least twice as many seniors as sophomores and juniors combined. What is the maximum number of juniors he can start?
15. In one state, regulations for school construction require at least 22 sq. ft. per pupil in each classroom. A room to accommodate 28 pupils is 25 feet 8 inches from corridor wall to windows. Find its minimum depth if the room is to meet regulations.