

EXTRA PRACTICE — Exercises

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Unit III – First Degree Relations with Two Placeholders

Part F – Problem Solving Using Two Placeholders

Lesson 3 – “Age” Problems

For each of the following story problems, answer the four analysis questions to find the system of equations needed to solve. Then solve and use common sense to check your answer.

1. If Bill were six years older, he would be, one-half as old as his father is now, and, if he was two years younger, he would be, one-fourth as old as his father is now. What are the ages of Bill and his father?
2. Martha’s age is twice that of her brother Ned. The sum of their ages is twenty-four. Find the age of each.
3. Leon is four times as old as Matthew. Ten years from now, Leon will be twice as old as Matthew will be, in ten years. Find the age of each now.
4. A father is, three times as old as his daughter. Eleven years from now, he will be only twice as old as his daughter will be, in eleven years. How old is each at present?
5. The combined age of two brothers is 25 years. Three years ago, the age of one boy exceeded twice the age of the other boy, by one year. Find the age of each boy.
6. Ann is twice as old as her son. Ten years ago, Ann was three times as old as her son was, ten years ago. What are their present ages?
7. Mary is twice as old as her son Charles. In four years, Mary will be three times the age of her son, six years ago. How old is each at present?
8. Sam is twice as old as Jack. Next year, the sum of their ages will be, five times the age of Jack, two years ago. How old are Sam and Jack now?
9. A man is, four times as old as his son. Sixteen years from now, he will be only twice as old as his son. How old is each at present?
10. Barry is twice as old as his youngest daughter. In eight years, Barry’s age will be, three times the age of his daughter six years ago. How old is each at present?

EXTRA PRACTICE — Answer Key

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For each of the following story problems, answer the four analysis questions to find the system of equations needed to solve. Then solve and use common sense to check your answer.

1. Bill's age is 10. His father's age is 32.
2. Martha is 16 years old. Ned is 8 years old.
3. Leon is 20 years old. Matthew is 5 years old.
4. Daughter is 11 years old. Father is 33 years old.
5. One boy is 9 and the other boy is 16.
6. Anne's age is 40 and her son is 20.
7. Martha is 44 and Charles is 22 years old.
8. Sam is 12 years old and Jack is 6 years old.
9. Man's age is 32 and his son is 8.
10. Barry is 52 years old. Daughter is 26 years old.