

My Dear little friend, when I was at your grand-father's, I gave you a question in figures of which you appear'd to be pleas'd with; you had solv'd the question, but I did not give the answer, because I could not remember it; consequently I send you that answer, together with some other questions and their answers for your amusement and instruction; if you please. The answers you will find on a separate piece of paper designated by numbers. I know that if they should be blind to you, you have one that can make you see.

1. A Man owns a circular farm containing 640 acres, which he wishes to divide in such a manner as to give to each of his two sons as large a circular farm as possible, and from the remainder he wishes to give to each of his two daughters as large a farm as possible, which are also to be circular. How many acres has each of the children? And how much has he left?

2. A Man had an acre of ground in the form of a circle. He wishes to lay off 3 circles within - tangent to each other, and tangent to the circumference. What is diameter of each circle?

3. In turning a one horse chaise within a ring of a certain diameter; it was observed that the outer wheel made three times, while the inner one made two. The wheels were of equal height, & five feet apart on the axle-tree. - What was the circumference of the circle described by each wheel?

4. Four women own a ball of butter five inches in diameter. It is agreed that each shall take her share separately from the surface of the ball. How many inches of its diameter shall each take?

5. A and B bought a cheese, 30 inches in diameter, ~~weighing~~ weighing 100 lb. A paid two thirds for it, and B the remainder; the cheese when cut, to be divided in this proportion. When about dividing it A proposed to take for his share as big a piece as could be cut square from the cheese; to which B agreed. Did A gain or lose, and how much?

6. If an ounce ball be $\frac{3}{4}$ of an inch in diameter; what is the diameter of a five pound Ball?

7. Suppose a horse was fastened to a post three feet in circumference by a rope 113 yards long. - How many miles will the horse have to travel in order to wind the rope around the post, provided, he keeps the rope constantly straight? ~~~~~

(8) Five girls went to market with peaches. They had respectively 18, 30, 42, 54, 66 each, which they sold at the same rate, each receiving forty two cents.

This problem to the ladies I send,	The one that will deliver to me,
Not to imbelly stripe,	The rates they sold this fruit,
For on its solution may depend	I shall for aye my favorite be,
My happiness through life.	No other will suit.

9. One evening I chanc'd with a tinker to sit,
Whose tongue ran a great deal too fast for his wit,
He talk'd of his art with abundance of mettle;
So I ask'd him to make me a flat bottom kettle.

Let the top and bottom diameters be,
In just such proportion as five is to three:
Twelve inches the depth I propos and no more;
And to hold in all gallons seven less than a score,
He promised to do it and strait to work went;
But when he had done it he found it too scant.

He alter'd it then, but too big he had made it;
For though it held right the diameters fail'd it;
Thus making it often too big and too little,

The tinker at last had quite spoiled his kettle;
But he swears he will bring his ^{said} promise to pass,
Or else he'll spoil every ounce of his brass.

Now to keep him from ruin, I pray find him out
The diameter's length, for he'll ne'er do't I doubt.

10. A man died leaving one thousand dollars to be divided among his three sons, A. 16, B. 11 and C. 6 years of age, in such proportion that the share of each being put to interest at 6 per cent, shall amount the same sum when they shall arrive at the age of 21. What did each receive.