

Challenge

Five Multiplications

Devin, Eve, Luz, Mark, and Perry were each given a factor by their teacher, Mr. Brown. The factors are 50, 300, 400, 6,000, and 8,000.

Mr. Brown wrote other factors on slips of paper. The factors he wrote were 60, 500, 700, 900, and 4,000. Each of the students picked a slip of paper and multiplied the factor written on it by the factor they were given.

Use the clues below to find the factor each student was given and the factor each picked.

- Luz was given the smallest factor but picked the greatest one.
- Eve was not given the greatest factor, but it was greater than the ones given to Mark and Devin.
- If you multiplied the factor Devin was given by 3, the answer would be the factor he picked.
- If you multiplied the factor Eve picked by 100, the answer would be the factor she was given.
- The factor Perry picked was less than the factor Mark picked.

Write the factors and the product for each student. Write the factor each was given first.

1. Devin _____

2. Eve _____

3. Luz _____

4. Mark _____

5. Perry _____

6. **Explain Your Thinking** How did you know which factor Perry was given?

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Write the factors and the product for each student. Write the factor each was given first.

1. Devin $300 \times 900 = 270,000$
2. Eve $6,000 \times 60 = 360,000$
3. Luz $50 \times 4,000 = 200,000$
4. Mark $400 \times 700 = 280,000$
5. Perry $8,000 \times 500 = 4,000,000$

6. **Explain Your Thinking** How did you know which factor Perry was given?

Luz was given the smallest factor. Eve's factor was greater than both Devin's and Mark's, but was not the greatest. So Eve's factor was second-greatest and Perry's was greatest.