

## Challenge

### Use Expanded Notation

Use the Expanded Notation method to solve each problem.  
Show your work in the space provided.

Show Your Work

1. Professor Cassatt gave a lecture in the auditorium of the art museum. The auditorium had 32 rows of seats, with 25 seats in each row. If every seat was filled, how many people attended the lecture?

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2. One modern painting was made up of 16 squares. The artist used exactly 99 brushstrokes of paint in each of the squares. How many brushstrokes did the artist use in the painting?

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3. An artist used flower petals to form the images in 22 of her small pictures. She used 67 flower petals in each small picture. How many flower petals did she use altogether?

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4. The museum asked 18 artists for 15 paintings each to hang for a special exhibit. How many paintings were in the special exhibit?

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5. One large gallery in the museum was 74 feet long and 48 feet wide. How much carpeting would be needed to cover the gallery floor?

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Show Your Work

1. Professor Cassatt gave a lecture in the auditorium of the art museum. The auditorium had 32 rows of seats, with 25 seats in each row. If every seat was filled, how many people attended the lecture?

**800 people**

$$\begin{array}{r} 1. \quad 32 \\ \times 25 \\ \hline 600 \\ 40 \\ 150 \end{array}$$

2. One modern painting was made up of 16 squares. The artist used exactly 99 brushstrokes of paint in each of the squares. How many brushstrokes did the artist use in the painting?

**1,584 brushstrokes**

$$\begin{array}{r} + 10 \\ \hline 800 \end{array} \quad 2. \quad \begin{array}{r} 16 \\ \times 99 \\ \hline 900 \\ 540 \\ 90 \end{array}$$

3. An artist used flower petals to form the images in 22 of her small pictures. She used 67 flower petals in each small picture. How many flower petals did she use altogether?

**1,474 flower petals**

$$\begin{array}{r} 3. \quad 22 \\ \times 67 \\ \hline 1,200 \\ 120 \\ 140 \end{array}$$

4. The museum asked 18 artists for 15 paintings each to hang for a special exhibit. How many paintings were in the special exhibit?

**270 paintings**

$$\begin{array}{r} + 14 \\ \hline 1,474 \end{array} \quad 4. \quad \begin{array}{r} 18 \\ \times 15 \\ \hline 100 \\ 80 \\ 50 \end{array}$$

5. One large gallery in the museum was 74 feet long and 48 feet wide. How much carpeting would be needed to cover the gallery floor?

**3,552 square feet**

$$\begin{array}{r} 5. \quad 74 \\ \times 48 \\ \hline 2,800 \\ 160 \\ 560 \\ + 32 \\ \hline 3,552 \end{array} \quad \begin{array}{r} + 40 \\ \hline 270 \end{array}$$