Factorial Examples with SimBraille

1. Six factorial is written
   \[ 6! \]

2. Four factorial equals twenty-four is written
   \[ 4! = 24 \]

3. Five factorial equals five times four times three times two times one is written
   \[ 5! = 5 \times 4 \times 3 \times 2 \times 1 \]

4. \( n \) factorial equals \( n \) times open parenthesis \( n \) minus one close parenthesis times open parenthesis \( n \) minus two close parenthesis times ellipsis times three times two times one is written
   \[ n! = n \times (n - 1) \times (n - 2) \times \ldots \times 3 \times 2 \times 1 \]
5. Open fraction n factorial over open parenthesis n minus k close parenthesis factorial close fraction is written
\[ \frac{n!}{(n-k)!} \]

6. Open fraction five factorial over one factorial four factorial close fraction is written
\[ \frac{5!}{1!4!} \]

7. Open fraction n factorial over open parenthesis n minus r close parenthesis factorial r factorial close fraction is written
\[ \frac{n!}{(n-r)!r!} \]