Multiply two fractions using models: fill in the missing factor.

Use the models below to find the missing factors.

a. \( \frac{2}{6} \times \square = \frac{6}{42} \)

b. \( \square \times \frac{4}{9} = \frac{16}{36} \)

c. \( \square \times \square = \frac{18}{99} \)
Multiply two fractions using models: fill in the missing factor

Use the models below to find the missing factors.

### a.

\[
\frac{2}{6} \times \_ = \frac{6}{42}
\]

The model has 6 columns. 2 out of these 6 columns are shaded in blue. These blue columns represent the given fraction \(\frac{2}{6}\). Also, the model has 7 rows. 3 out of these 7 rows are shaded in green. These green rows represent the missing fraction \(\frac{3}{7}\).

Therefore, the complete expression is \(\frac{2}{6} \times \frac{3}{7} = \frac{6}{42}\).

### b.

\[
\_ \times \frac{4}{9} = \frac{16}{36}
\]

The model has 4 columns. 4 out of these 4 columns are shaded in grey. These grey columns represent the missing fraction \(\frac{4}{4}\). Also, the model has 9 rows. 4 out of these 9 rows are shaded in orange. These orange rows represent the missing given fraction \(\frac{4}{9}\).

Therefore, the complete expression is \(\frac{4}{4} \times \frac{4}{9} = \frac{16}{36}\).

### c.

\[
\frac{6}{11} \times \_ = \frac{18}{99}
\]

The model has 11 columns. 6 out of these 11 columns are shaded in yellow. These yellow columns represent the fraction \(\frac{6}{11}\) (11 is the missing number). Also, the model has 9 rows. 3 out of these 9 rows are shaded in purple. These purple rows represent the missing fraction \(\frac{3}{9}\).

Therefore, the complete expression is \(\frac{6}{11} \times \frac{3}{9} = \frac{18}{99}\).