

$$\frac{16 \text{ yards}}{3 \text{ costumes}} = \frac{x \text{ yards}}{8 \text{ costumes}}$$

$$\frac{16}{3} = \frac{x}{8}$$

$$16 \cdot 8 = 3x$$

$$128 = 3x$$

$$\frac{128}{3} = \frac{3x}{3}$$

$$42\frac{2}{3} \text{ yards} = x$$