

Exercise 147

In the following exercises, simplify.

$$\frac{14x^2}{21y}$$

Solution

Write out the prime factorizations of $14x^2$ and $21y$.

$$\begin{aligned}14x^2 &= 2 \times 7 \times x^2 \\ &= 2 \times 7 \times x \times x\end{aligned}$$

$$21y = 3 \times 7 \times y$$

Therefore,

$$\frac{14x^2}{21y} = \frac{2 \times \cancel{7} \times x \times x}{3 \times \cancel{7} \times y} = \frac{2x^2}{3y}.$$