

Multiply and divide algebraic fractions

H

1

a) Work out $7 \times \frac{1}{2} =$

b) Work out $x \times \frac{1}{2} =$

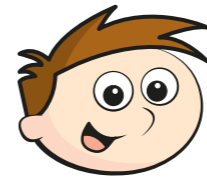
c) Substitute $x = 7$ into your answer to part b).

d) What do you notice about your answers to a) and c)?

2

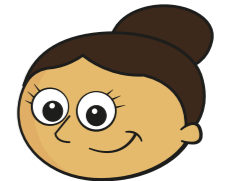
Match each expression to a simplified version.

3



Teddy

$\frac{3}{4}x$ and $\frac{3x}{4}$ are exactly the same fraction.



Dora

No they're not, the numbers and letters are arranged differently.

Work out $\frac{3}{4}x$ and $\frac{3x}{4}$ using the given values of x .

a) $x = 2$

$$\frac{3}{4}x = \frac{3}{4} \times 2 =$$

$$\frac{3x}{4} = \frac{3 \times 2}{4} =$$

b) $x = 3$

$$\frac{3}{4}x =$$

$$\frac{3x}{4} =$$

c) $x = 10$

$$\frac{3}{4}x =$$

$$\frac{3x}{4} =$$

Do you agree with Teddy or Dora? _____

Explain why.

4 Simplify the calculations.

a) $x \times \frac{1}{3} =$

d) $\frac{x}{2} \times \frac{1}{3} =$

b) $\frac{4}{5} \times y =$

e) $\frac{y}{5} \times \frac{2}{3} =$

c) $\frac{1}{5} \times z \times 3 =$

f) $\frac{3}{5} \times \frac{z}{2} \times 4 =$

5 Circle the expression in each set that is **not** equivalent to the others.

a) $\frac{2a}{5}$ $a \times 2 \div 5$ $\frac{a \times 2}{5}$ $a \div 2 \times 5$

b) $\frac{2a}{3}$ $a \times \frac{2}{3}$ $a \div 2 \times 3$ $a \div 3 \times 2$

6 Complete the calculations.

a) $\frac{w}{7} \div 2 =$

c) $\frac{3}{w} \div w =$

b) $\frac{3}{w} \div 2 =$

d) $\frac{w}{5} \div 2w =$

7 Simplify the expressions.

a) $\frac{a}{5} \times \frac{b}{3} =$

d) $\frac{a}{5} \div \frac{3}{b} =$

b) $\frac{a}{5} \times \frac{3}{b} =$

e) $\frac{a}{4} \times \frac{b}{2} =$

c) $\frac{a}{5} \div \frac{b}{3} =$

f) $\frac{2}{b} \times \frac{a}{4} =$