Multiplying and Dividing Fractions

1. The rule for multiplying is: top x top and bottom x bottom. You don't need a common denominator!!!!!

    (a) $\frac{1}{3} \times \frac{2}{5}$ (b) $\frac{2}{3} \times \frac{3}{5}$ (c) $\frac{3}{5} \times \frac{1}{6}$ (d) $\frac{4}{7} \times \frac{3}{2}$

2. This can be extended to three fractions.

    (a) $\frac{4}{5} \times \frac{2}{3} \times \frac{3}{4}$ (b) $\frac{3}{5} \times \frac{1}{3} \times \frac{5}{8}$ (c) $\frac{4}{7} \times \frac{1}{8} \times \frac{2}{3}$ (d) $\frac{2}{97} \times \frac{97}{99} \times \frac{99}{100}$

3. Mixed fractions must be converted to top-heavy (improper) fractions first....

    (a) $1\frac{2}{3} \times 1\frac{3}{4}$ (b) $2\frac{1}{5} \times 1\frac{1}{3}$ (c) $3\frac{1}{2} \times 2\frac{2}{3}$ (d) $4\frac{1}{3} \times 1\frac{2}{7}$
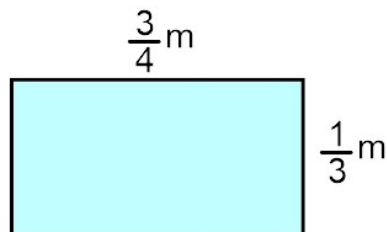
    (e) $3\frac{3}{4} \times 2$ (f) $2\frac{2}{3} \times 4$ (g) $2\frac{5}{8} \times \frac{3}{4}$ (h) $3\frac{4}{5} \times 4\frac{4}{9}$

4. Calculate the area of the rectangle shown here.

$\frac{3}{4}$ m

$\frac{1}{3}$ m

5. A meter length or iron weighs $3\frac{1}{2}$ kg. What would the weight of $2\frac{1}{4}$ m be?

6. A small pick'n'mix container holds $\frac{3}{5}$ kg of sweets.
    The large container holds $2\frac{1}{3}$ times as much.
    What weight of sweets can the large container hold?

7. To divide fractions, flip the second and change to multiply!

    (a) $\frac{2}{3} \div \frac{1}{5}$

    (b) $\frac{3}{4} \div \frac{4}{7}$

    (c) $\frac{3}{7} \div \frac{2}{5}$

    (d) $\frac{4}{9} \div \frac{2}{3}$

    (e) $\frac{3}{4} \div \frac{1}{7}$

    (f) $\frac{4}{5} \div \frac{3}{8}$

    (g) $3 \div \frac{2}{3}$

    (h) $\frac{1}{9} \div 4$

8. Now try these mixed fractions….

    (a) $2\frac{2}{3} \div 1\frac{1}{4}$

    (b) $3\frac{1}{5} \div 2\frac{1}{7}$

    (c) $1\frac{1}{6} \div 2\frac{2}{3}$

    (d) $3\frac{1}{3} \div 2\frac{2}{9}$
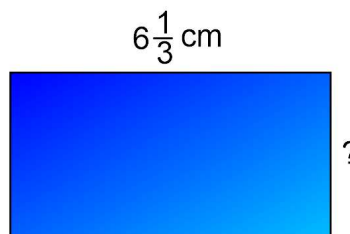
    (e) $3\frac{3}{4} \div 2$

    (f) $3\frac{1}{5} \div 2\frac{3}{4}$

    (g) $2\frac{5}{8} \div \frac{3}{4}$

    (h) $5\frac{1}{3} \div 2\frac{5}{9}$

9. David must split $1\frac{3}{7}$ kg of sweets equally into 8 bags.
    What weight of sweets would go in each bag?

10. The area of the rectangle show is $20\frac{3}{7}$ cm².
    What is the breadth of the rectangle?

$6\frac{1}{3}$ cm

?

11. Simplify.

    (a) $\frac{x}{5} \times \frac{2}{3}$

    (b) $\frac{x}{y} \times \frac{2}{y}$

    (c) $\frac{3}{a} \times \frac{2}{b} \times \frac{1}{c}$

    (d) $\frac{3}{a} \div \frac{6}{b}$

    (e) $\frac{4}{y} \div \frac{2x}{y}$