Rosie says,

> To find equivalent fractions, whatever you do to the numerator, you do to the denominator.

Using her method, here are the equivalent fractions Rosie has found for $\frac{4}{8}$

$$\frac{4}{8} = \frac{8}{16} \qquad \frac{4}{8} = \frac{6}{10}$$

$$\frac{4}{8} = \frac{2}{4} \qquad \frac{4}{8} = \frac{1}{5}$$

Are all Rosie's fractions equivalent?
Does Rosie's method work?
Explain your reasons.

Here are some fraction cards.
All of the fractions are equivalent.

$$\frac{4}{A} \qquad \frac{B}{C} \qquad \frac{20}{50}$$

$A + B = 16$
Calculate the value of C.

$\frac{4}{8} = \frac{1}{5}$ and $\frac{4}{8} = \frac{6}{10}$
are incorrect.

Rosie's method doesn't always work. It works when multiplying or dividing both the numerator or denominator but not when adding or subtracting the same thing to both.

$A = 10$
$B = 6$
$C = 15$