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Teachers' Professional College -----23th Jan. 2018



Review:



$$\frac{7}{9} > \frac{7}{10}$$

$$\frac{6}{12} > \frac{6}{16}$$

$$\frac{11}{16} < \frac{15}{16}$$

$$1 = \frac{3}{3}$$

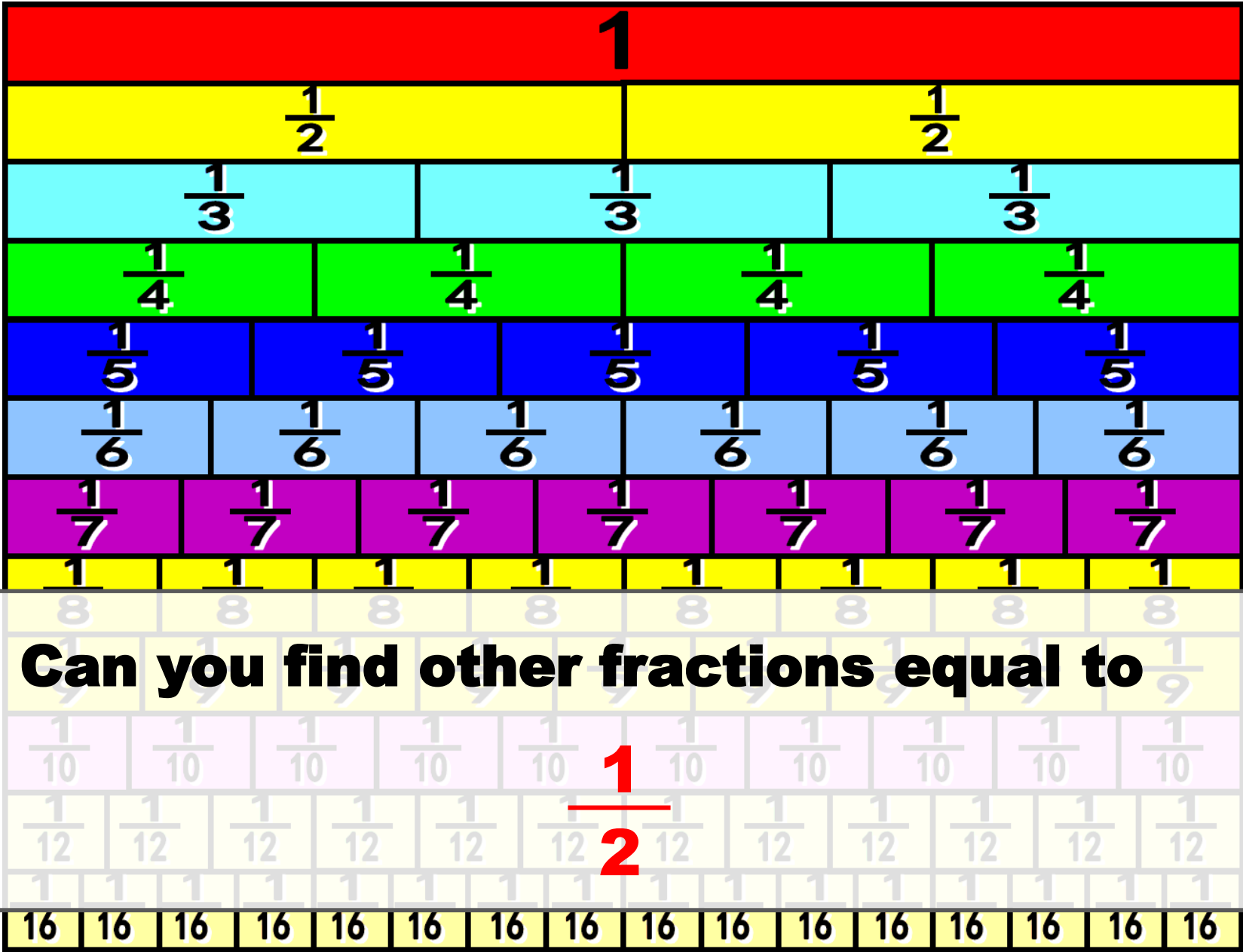
$$1 = \frac{3}{3} = (\quad) = (\quad) = (\quad) \dots\dots$$

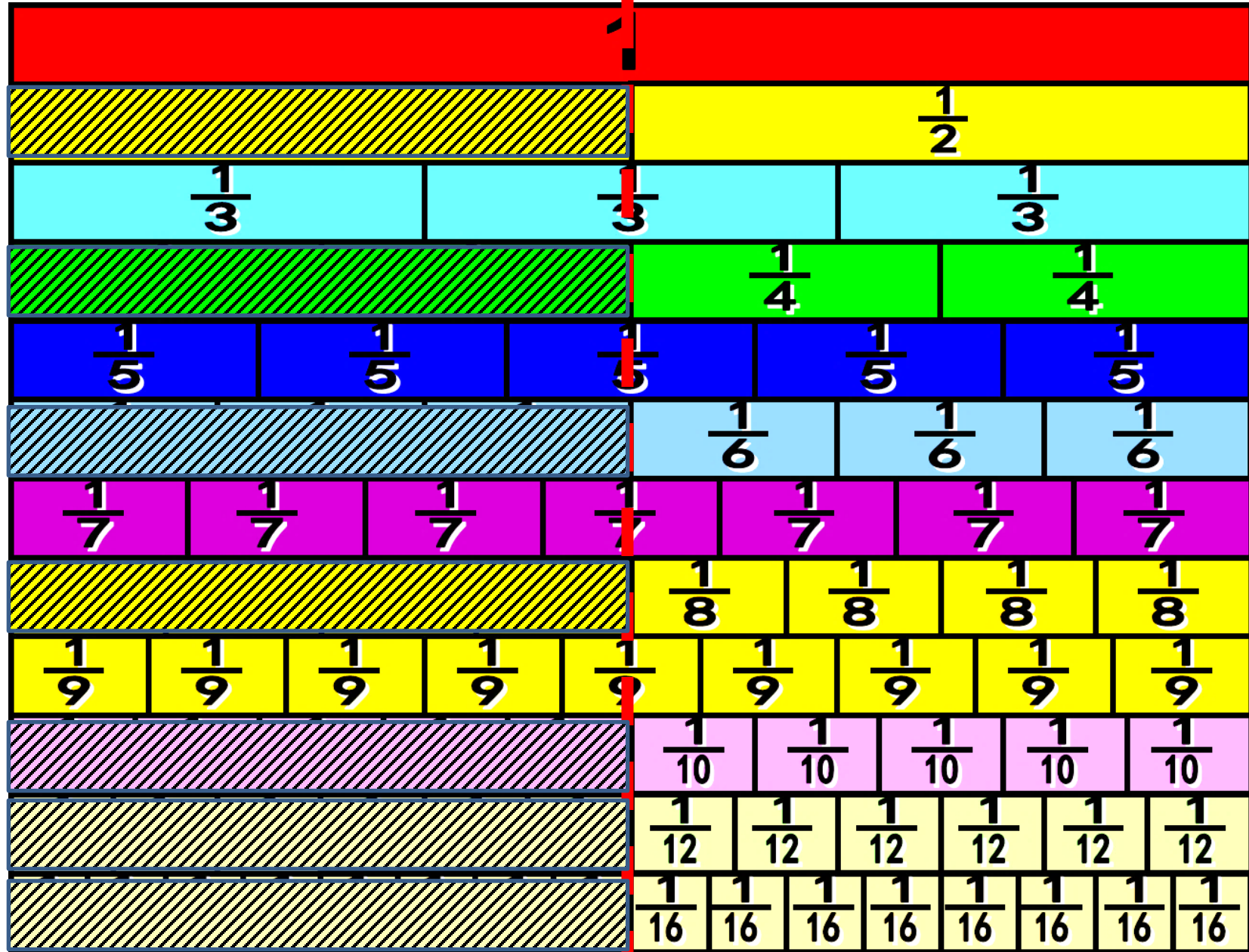


Equivalent Fractions



材料：尺，分数墙，白板笔，铅笔





$$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8} = \frac{5}{10} = \frac{6}{12} = \frac{8}{16} \dots$$

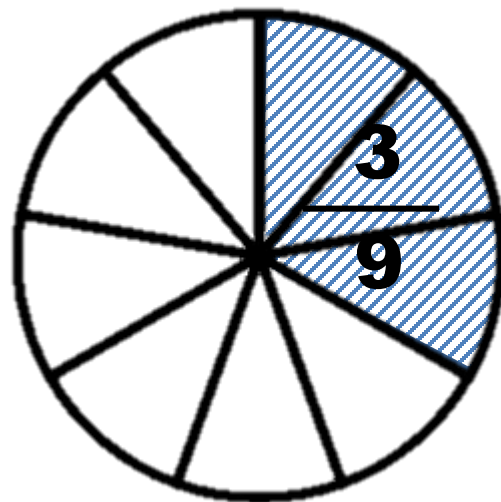
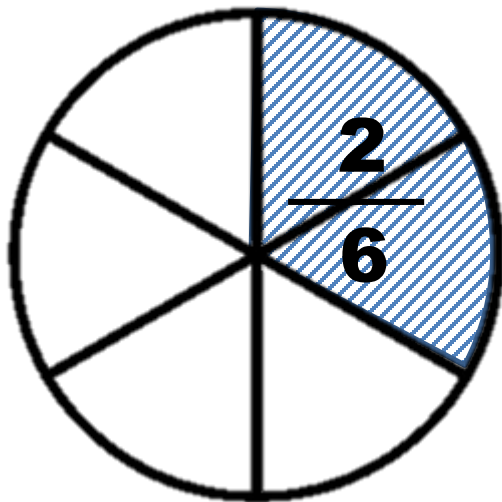
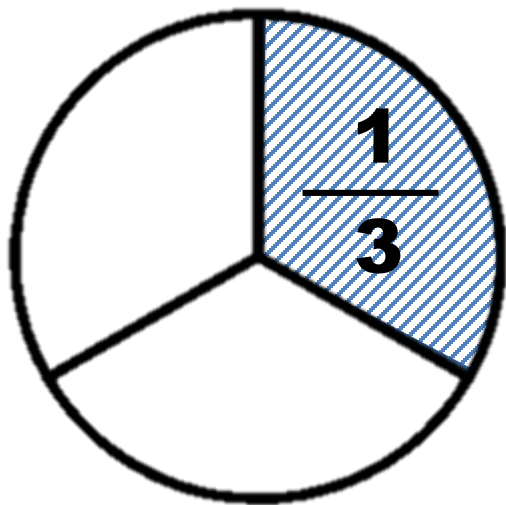


Compare

$$\frac{1}{3}$$

$$\frac{2}{6}$$

$$\frac{3}{9}$$



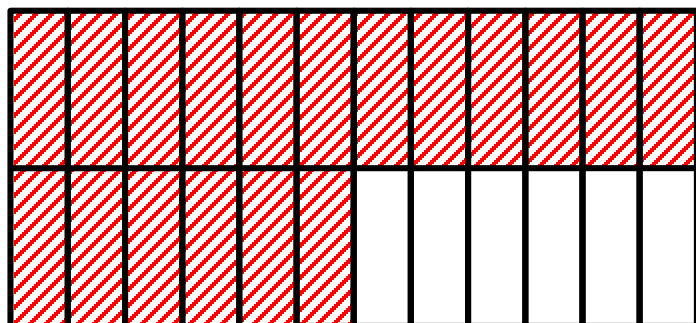


Compare

$$\frac{3}{4}$$

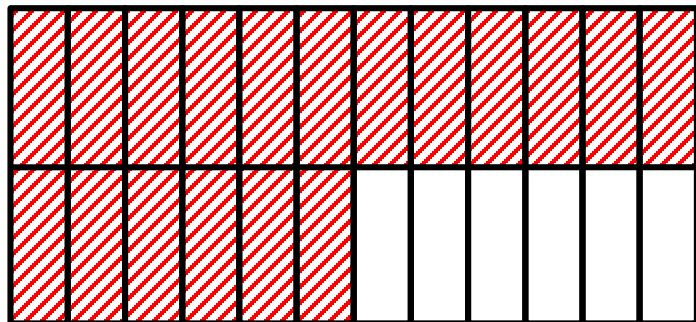
$$\frac{6}{8}$$

$$\frac{9}{12}$$



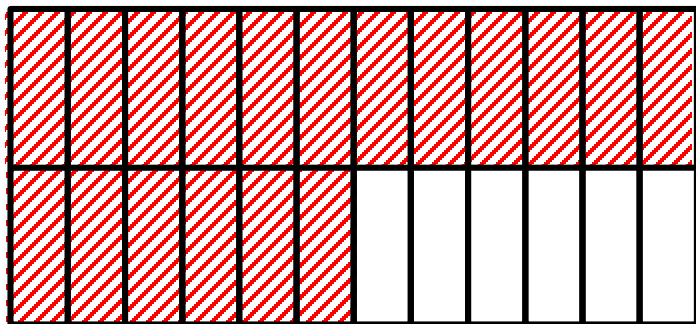
$$\frac{3}{4}$$

Each part has **6** grids



$$\frac{6}{8}$$

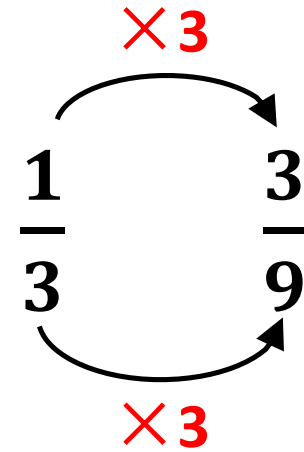
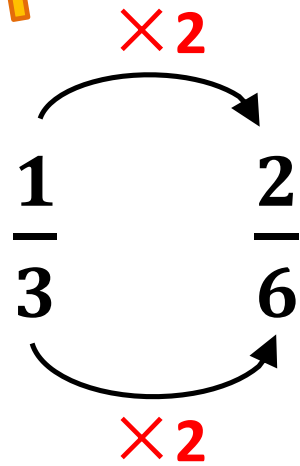
Each part has **3** grids



$$\frac{9}{12}$$

Each part has **2** grids

Conclusion



If you multiply or divide numerators and denominators by the same number(except **0**), the new fraction will be equivalent to the original fraction



Exercises 1: Find equivalent fractions and fill in the blanks:

$$\frac{1}{3}$$

$$\frac{6}{8}$$

$$\frac{3}{7}$$

$$\frac{6}{14}$$

$$\frac{12}{16}$$

$$\frac{3}{9}$$

$$(\quad) = (\quad)$$

$$(\quad) = (\quad)$$

$$(\quad) = (\quad)$$



Exercises 2: Choose the correct answer:

$$1) \frac{4}{5} = \frac{12}{(C)} = \frac{(A)}{20} = \frac{(B)}{(D)}$$

Diagram illustrating the conversion of the fraction $\frac{4}{5}$ to equivalent fractions:

- $\frac{4}{5} \times 3 = \frac{12}{15}$ (labeled **C**)
- $\frac{4}{5} \times 4 = \frac{16}{20}$ (labeled **A**)
- $\frac{4}{5} \times 5 = \frac{20}{25}$ (labeled **B**)
- $\frac{4}{5} \times 3 = \frac{12}{15}$ (labeled **C**)
- $\frac{4}{5} \times 4 = \frac{16}{20}$ (labeled **A**)
- $\frac{4}{5} \times 5 = \frac{20}{25}$ (labeled **D**)

A. **16**

B. **20**

C. **15**

D. **25**

2) Compare with $\frac{2}{6}$, $\frac{4}{12}$ and $\frac{3}{9}$, which is not equivalent (**D**)

A. $\frac{1}{3}$

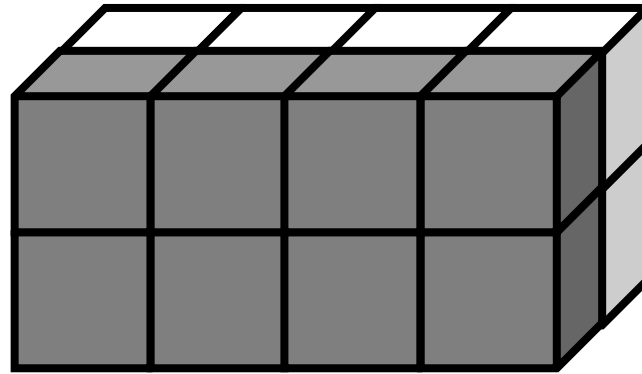
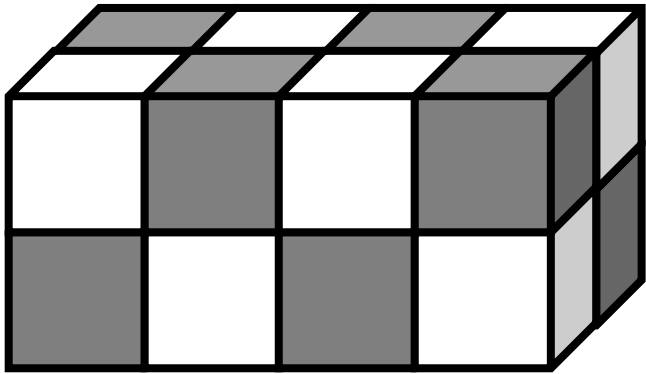
B. $\frac{5}{15}$

C. $\frac{6}{18}$

D. $\frac{12}{21}$



Exercises 3: Write equivalent fractions according to the picture:



$$\left(\frac{\mathbf{1}}{\mathbf{2}}\right) = \left(\frac{\mathbf{2}}{\mathbf{4}}\right) = \left(\frac{\mathbf{4}}{\mathbf{8}}\right) = \left(\frac{\mathbf{8}}{\mathbf{16}}\right)$$

■ ■ ■ ■

When calculate the addition $\frac{1}{5} + \frac{8}{20}$

When we're adding fractions, they must **have the same denominator**,

$$\frac{1}{5} \times \frac{(4)}{(4)} = \frac{(4)}{(20)} \rightarrow \frac{1}{5} + \frac{8}{20} = \frac{(4)}{(20)} + \frac{(8)}{(20)}$$

or $\frac{8}{20} \div \frac{(4)}{(4)} = \frac{(2)}{(5)} \rightarrow \frac{1}{5} + \frac{8}{20} = \frac{(1)}{(5)} + \frac{(2)}{(5)}$



Challenge

$$\frac{5}{9} = \frac{(10)}{18} = \frac{25}{45}$$

The diagram illustrates the simplification of the fraction $\frac{25}{45}$ to $\frac{5}{9}$. A top arrow labeled $\div 5$ points from the numerator 25 to the numerator 5. A bottom arrow labeled $\div 5$ points from the denominator 45 to the denominator 9. A middle arrow labeled $\div 5$ points from the numerator 10 to the denominator 18. The number 10 in the numerator of the middle fraction is highlighted in red.

They have the same common divisor of **9**

**What did
you learn in
this lesson?**

