



# Helping With Math

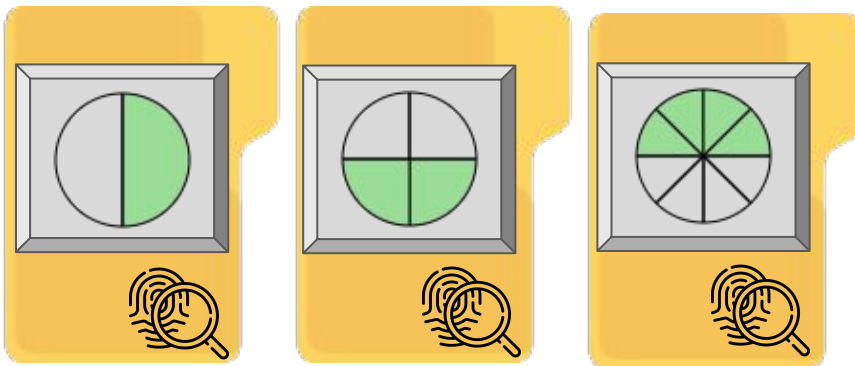
## Solving Equivalent Fractions



GRADE 3



Fraction, in general, simply states the parts of a whole of a certain object or number. Meanwhile, equivalent fraction can be defined as the fractions with the same value, even though they may look different.



Good day! I am detective John. Are my fraction cases equivalent or not?



### FRACTION

- It represents a part of a whole
- It is a small or tiny proportion of something

### FRACTION NOTATION

**NUMERATOR**  
It tells the number of equal parts taken

1

2

It tells the total number of equal parts in a whole

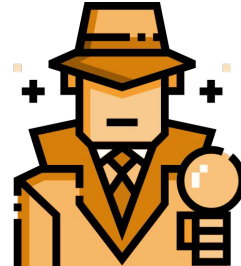
**DENOMINATOR**



## EQUIVALENT FRACTIONS

### EQUIVALENT FRACTIONS

It can be defined as fractions with different numerators and denominators that represent the same value of the whole

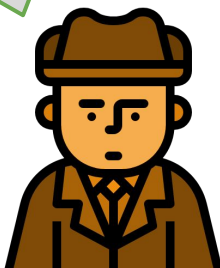


These fractions are really the same:

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

Why? Because when you multiply or divide both the top and bottom by the same number, the fraction keeps its value.

The rule to remember...

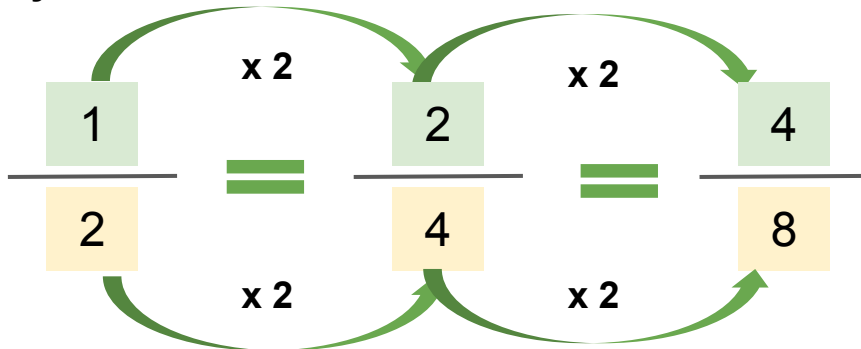


**“Change the bottom using multiply or divide, and the same to the top must be applied”**



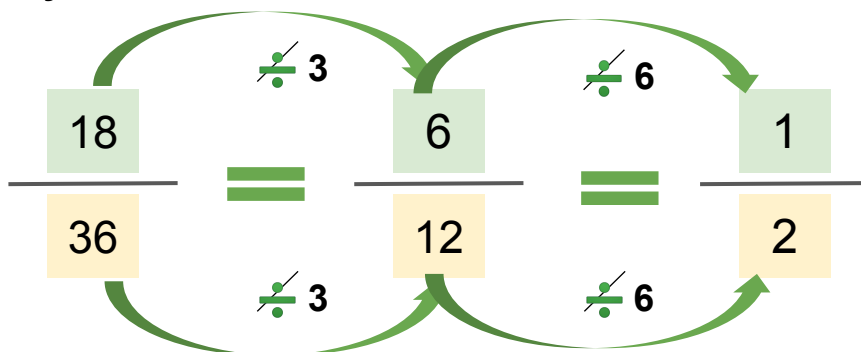
# EQUIVALENT FRACTIONS

Here is why these fractions are the same:



## DIVIDING

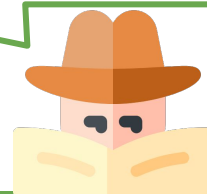
Here is why these fractions are the same:



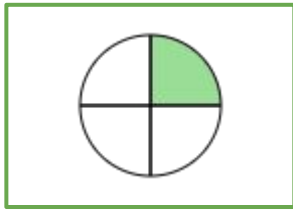
- Choose the number you divide by so that the results (top and bottom) stay whole numbers
- If we keep dividing further, then the fraction is simplified

## SUMMARY

- You can make equivalent fractions by multiplying or dividing both top and both by the same amount
- Only divide when the top and bottom stay as whole numbers



# EXAMPLE / EXERCISE ON EQUIVALENT FRACTIONS



=



$$\frac{1}{4}$$

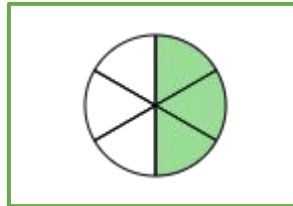
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$$\frac{2}{8}$$

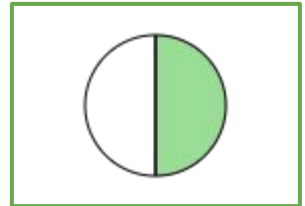
EQUIVALENT FRACTIONS



EQUIVALENT FRACTIONS





=

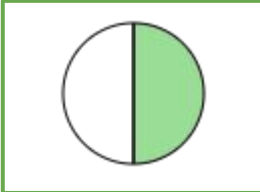



$$\frac{3}{6}$$

=

$$\frac{1}{2}$$

 =   
 =

 =   
 =



# TABLE OF ACTIVITIES

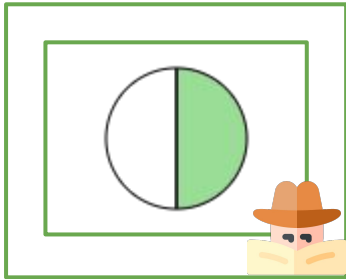
1. Detective Fraction
2. Mrs. N is Missing!
3. The D Case
4. Mr. Fraction's Crime
5. The Crime Suspects
6. Which is the Right Suspect?
7. Crime Suspects' Names
8. Identify their Names
9. Classify the Case, Detective
10. Case Solved!



# DETECTIVE FRACTION

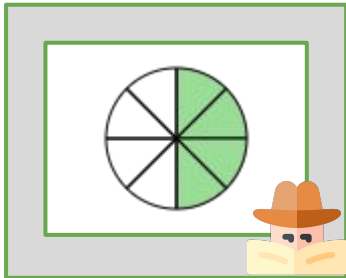
Let us help the detective to solve his cases! Draw a line to connect and match the equivalent fractions.

1



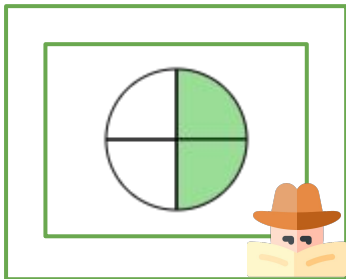
A

2



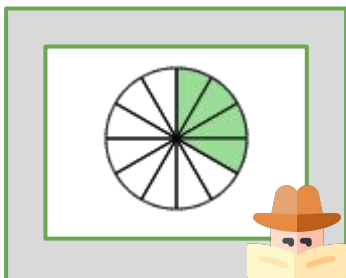
B

3



C

4



D




# MRS. N IS MISSING!

Oh no, Mrs. N is missing! Help the detective to find her by filling in the missing numerators to complete the equivalent fractions.

**1**

$$\frac{2}{5} = \frac{?}{30}$$

**2**

$$\frac{1}{2} = \frac{?}{18}$$


**3**

$$\frac{6}{18} = \frac{?}{3}$$


**4**

$$\frac{5}{10} = \frac{?}{2}$$

**5**

$$\frac{2}{3} = \frac{?}{21}$$


**6**

$$\frac{16}{24} = \frac{?}{3}$$


# THE D CASE

A private investigator is solving the case for D. Fill in the missing denominators to complete the equivalent fractions.

1

$$\frac{8}{20} = \frac{2}{\square}$$


2

$$\frac{5}{7} = \frac{15}{\square}$$


3

$$\frac{4}{12} = \frac{12}{\square}$$

4

$$\frac{8}{10} = \frac{32}{\square}$$

5

$$\frac{3}{10} = \frac{12}{\square}$$


6

$$\frac{16}{24} = \frac{4}{\square}$$





# MR. FRACTION'S CRIME

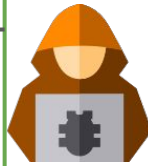
Let us help the numerator and denominator cooperatives to file a case against Mr. Fraction! Fill in the missing numerator or denominator to complete the equivalent fraction.

1

$$\frac{3}{7} = \frac{12}{\square}$$

2

$$\frac{12}{27} = \frac{\square}{9}$$



3

$$\frac{2}{9} = \frac{8}{\square}$$

4

$$\frac{7}{12} = \frac{\square}{60}$$

5

$$\frac{5}{8} = \frac{15}{\square}$$

6

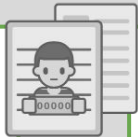
$$\frac{12}{27} = \frac{\square}{9}$$



# THE CRIME SUSPECTS

The crime suspects finally arrived at the police station! Shade the figure based on the equivalent fractions shown below.

1



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



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

2



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



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

3

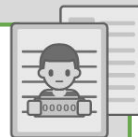


$$\frac{1}{2}$$



$$\frac{4}{8}$$

4

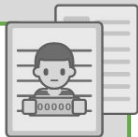


$$\frac{4}{16}$$



$$\frac{1}{4}$$

5



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



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

6



$$\frac{2}{8}$$



$$\frac{4}{16}$$



# WHICH IS THE RIGHT SUSPECT?

Who is the right suspect for Mike's death? Choose the correct equivalent fraction in each number. Color your answer.

1

$\frac{2}{16}$

$\frac{1}{4}$

$\frac{1}{8}$

$\frac{4}{20}$

$\frac{3}{18}$

2

$\frac{4}{12}$

$\frac{14}{6}$

$\frac{3}{18}$

$\frac{1}{2}$

$\frac{6}{18}$

3

$\frac{3}{18}$

$\frac{5}{30}$

$\frac{1}{9}$

$\frac{4}{16}$

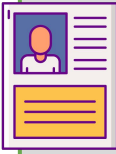



$\frac{1}{2}$



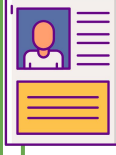



# CRIME SUSPECTS' NAMES

Let us identify the names of the primary suspects of the crime. Write 3 equivalent fractions for each given.

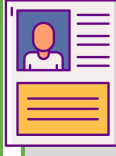



1

4				
16				

2

1				
6				

3

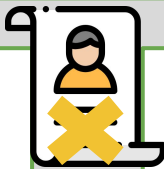
2				
5				



# MISTAKEN IDENTITY

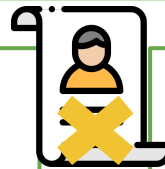
Authorities thought that John is the suspect! Write the fraction based on the shaded portion of each figure. Afterwards, write its equivalent fraction based on the figure, then color or shade the shape based on your answer.

1



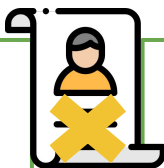
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2



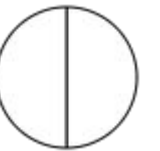
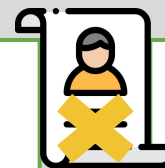
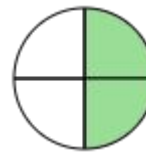
=

3



=

4

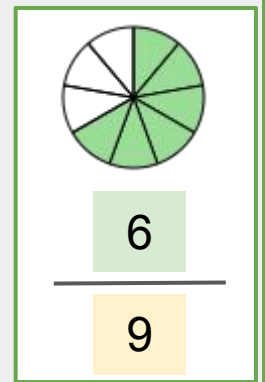
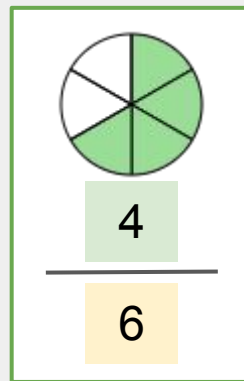
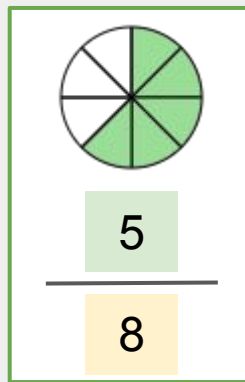
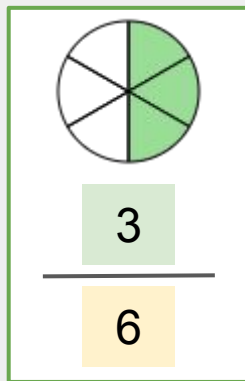
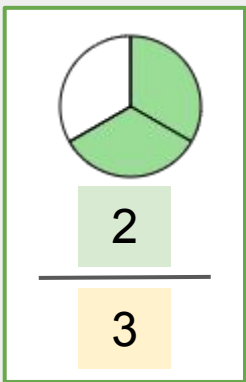


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# CLASSIFY THE CASE, DETECTIVE

Let us help the detective to classify his cases. Look at the fractions below. Identify the three fractions that are equal. Cut and paste it on the detective's folder.





# ANSWER GUIDE

## Activity 1

1. C
2. D
3. A
4. B

## Activity 2

1. 12
2. 9
3. 1
4. 1
5. 14
6. 2

## Activity 3

1. 5
2. 21
3. 36
4. 40
5. 40
6. 6





# ANSWER GUIDE

## Activity 4

1. 28
2. 4
3. 36
4. 35
5. 24
6. 4

## Activity 5

1. Shaded parts: 6 and 3
2. Shaded parts: 1 and 2
3. Shaded parts: 1 and 4
4. Shaded parts: 4 and 1
5. Shaded parts: 2 and 1
6. Shaded parts: 2 and 4

## Activity 6

1.  $\frac{1}{8}$
2.  $\frac{6}{18}$
3.  $\frac{5}{30}$



# ANSWER GUIDE

## Activity 7

These are just common possible answers.

1.  $\frac{1}{4}$ ,  $\frac{8}{32}$ ,  $\frac{12}{48}$
2.  $\frac{2}{12}$ ,  $\frac{3}{18}$ ,  $\frac{4}{24}$
3.  $\frac{4}{10}$ ,  $\frac{6}{15}$ ,  $\frac{8}{20}$

## Activity 8

1.  $\frac{10}{12}$  and  $\frac{1}{6}$
2.  $\frac{3}{6}$  and  $\frac{1}{2}$
3.  $\frac{10}{20}$  and  $\frac{1}{2}$
4.  $\frac{2}{4}$  and  $\frac{1}{2}$

## Activity 9

The equivalent fractions are  $\frac{2}{3}$ ,  $\frac{3}{6}$ , and  $\frac{6}{9}$

## Activity 10

Answers may vary as the questions require subjective answers.



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