CRAVEN
COMMUNITY COLLEGE

# TABE Math-E

# PAXEN

## Unit-4 Fractions

## Lesson 26
## Equivalent Fractions
## (Scale up and Scale Down)

Revised: October 16, 2023

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Some graphics may not have copied well during the scan process.

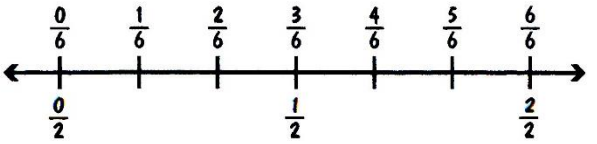
# Math-E - Lesson 26 – Equivalent Fractions

## Lesson 26 Equivalent Fractions

3.NF.3.a – Hig

You can find two or more fractions that are the same size or at the same point on a number line. These fractions are **equivalent** because they name the same amount. Each fraction refers t the same whole.

**Example** **Which pairs of fractions are equivalent?**




1) Look at the fractions above and below the number line.

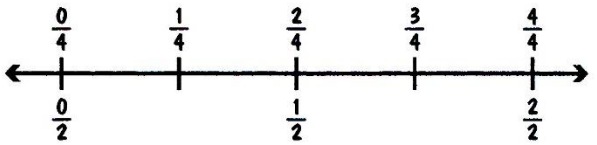
2) Notice the fractions that show the same value.

- $\frac{0}{6}$ and $\frac{0}{2}$ show the same value.
- $\frac{3}{6}$ and $\frac{1}{2}$ show the same value.
- $\frac{6}{6}$ and $\frac{2}{2}$ show the same value.

So, the pairs of equivalent fractions are $\frac{0}{6}$ and $\frac{0}{2}$, $\frac{3}{6}$ and $\frac{1}{2}$, and $\frac{6}{6}$ and $\frac{2}{2}$.

### Test Example

1. Which fraction is equivalent to $\frac{2}{4}$?




A. $\frac{2}{3}$

B. $\frac{5}{8}$

C. $\frac{1}{2}$

D. $\frac{1}{4}$

1. **C** On a number line, $\frac{2}{4}$ and $\frac{1}{2}$ are both halfway between 0 and 1. $\frac{2}{4}$ is equivalent to $\frac{1}{2}$.

**Hint**

One way to find equivalent fractions is to multiply or divide both the numerator and denominator by the same number. You can choose any number except zero.

$\frac{2}{4}$ ← **numerator**
← **denominator**

Example:

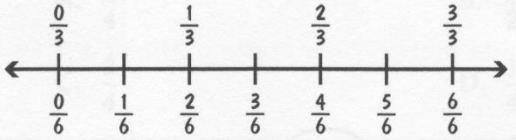
$\frac{2 \times 2}{4 \times 2} = \frac{4}{8}$

# Math-E - Lesson 26 – Equivalent Fractions

## Practice

**Read each question. Select the correct answer.**

**1** Which fraction is equivalent to $\frac{2}{6}$?



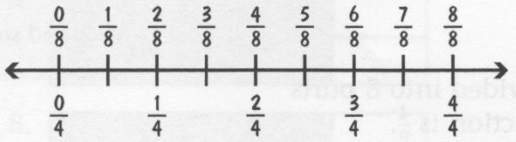

A. $\frac{0}{3}$

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

C. $\frac{2}{3}$

D. $\frac{3}{3}$

**2** Which fraction is equivalent to $\frac{3}{4}$?



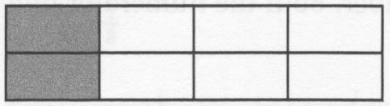

A. $\frac{3}{8}$

B. $\frac{5}{8}$

C. $\frac{6}{8}$

D. $\frac{7}{8}$

**3** Which fraction is equivalent to the shaded part of the model shown?



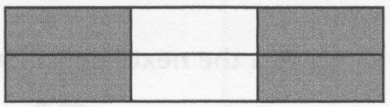
A. $\frac{6}{8}$

B. $\frac{3}{4}$

C. $\frac{3}{8}$

D. $\frac{1}{4}$

**4** Which fraction is equivalent to the shaded part of the model shown?



A. $\frac{2}{3}$

B. $\frac{1}{2}$

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

D. $\frac{2}{6}$

**5** Which number makes the equation true?

$$\frac{1}{3} = \frac{\square}{6}$$

A. 1 B. 2

C. 3 D. 4

**6** Which number makes the equation true?

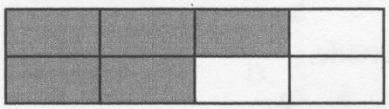
$$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{\square}{8}$$

A. 8 B. 6

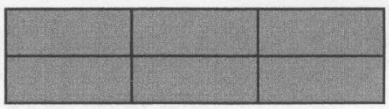
C. 5 D. 4

**7** Which model is shaded to show a fraction equivalent to $\frac{2}{2}$?

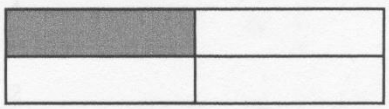
A.



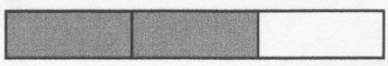
B.



C.



D.



# Math-E - Lesson 26 – Equivalent Fractions

## Lesson 26 Equivalent Fractions

(3.NF.3.a)

1. B. The fraction on the number line that is directly above $\frac{2}{6}$ is $\frac{1}{3}$.
2. C. The fraction on the number line that is directly above $\frac{3}{4}$ is $\frac{6}{8}$.
3. D. The fraction model for eighths shows $\frac{2}{8}$ shaded. The fraction equivalent to $\frac{2}{8}$ is $\frac{1}{4}$.
4. A. The fraction model for sixths shows $\frac{4}{6}$ shaded. The fraction equivalent to $\frac{4}{6}$ is $\frac{2}{3}$.
5. B. The number that makes the equation $\frac{1}{3} = \frac{\square}{6}$ true is 2. $\frac{1}{3} = \frac{2}{6}$
6. D. The number that makes the equation $\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{\square}{8}$ true is 4. $\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{4}{8}$
7. B. The fraction model equivalent to $\frac{2}{2}$ is the fraction model for $\frac{6}{6}$. $\frac{2 \times 3}{2 \times 3} = \frac{6}{6}$

# Math-E - Lesson 26 – Equivalent Fractions

## Practice 26 Equivalent Fractions

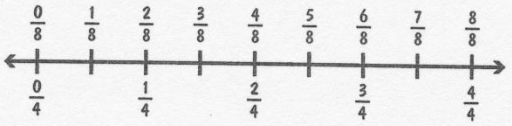
3.NF.3.a – High

**1** Which number makes the equation true?

$$\frac{1}{6} = \frac{\square}{18}$$

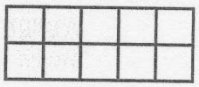
A. 1
B. 2
C. 3
D. 4

**2** Which fraction is equivalent to $\frac{1}{4}$?




A. $\frac{2}{8}$
B. $\frac{3}{8}$
C. $\frac{6}{8}$
D. $\frac{8}{8}$

**3** Which two fractions are equivalent to the shaded part of the model shown?

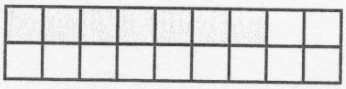


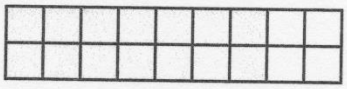
A. $\frac{4}{20}$
B. $\frac{8}{20}$
C. $\frac{12}{20}$
D. $\frac{1}{5}$
E. $\frac{2}{5}$
F. $\frac{3}{5}$

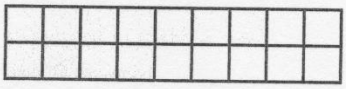
**4** Duante saves $\frac{1}{9}$ of his salary each pay period. Sydney saves an equivalent amount of her salary each pay period. What fraction is equivalent to the amount Sydney saves each pay period?

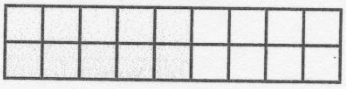
A. $\frac{4}{18}$
B. $\frac{3}{18}$
C. $\frac{2}{18}$
D. $\frac{1}{18}$

**5** Which model is shaded to show a fraction equivalent to $\frac{7}{9}$?

A.


B.


C.


D.


**6** When the Blake family goes hiking, they pack granola bars for snacks. All members of the family eat the same amount of their granola bar during the first break. Ryan eats $\frac{3}{12}$ of his granola bar, Nathan eats $\frac{2}{8}$ of his granola bar, and Sabine eats $\frac{1}{4}$ of her granola bar. What fraction of her granola bar does Darlene eat?

A. $\frac{5}{20}$
B. $\frac{6}{18}$
C. $\frac{5}{15}$
D. $\frac{4}{12}$

**7** Lanelle paints her bedroom and completes an equivalent portion of the room each day. On Tuesday, she paints $\frac{3}{9}$ of her bedroom. On Wednesday, she paints $\frac{2}{6}$ of her bedroom. How much of her bedroom does Lanelle paint on Thursday?

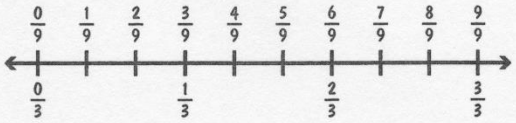
A. $\frac{1}{8}$
B. $\frac{2}{8}$
C. $\frac{1}{3}$
D. $\frac{2}{3}$

**8** Which fraction is equivalent to $\frac{8}{14}$?

A. $\frac{4}{5}$
B. $\frac{4}{6}$
C. $\frac{2}{7}$
D. $\frac{4}{7}$

# Math-E - Lesson 26 – Equivalent Fractions

**9** Which pair of fractions are equivalent on the number line?




A. $\frac{9}{9}$ and $\frac{3}{3}$

B. $\frac{7}{9}$ and $\frac{2}{3}$

C. $\frac{5}{9}$ and $\frac{2}{3}$

D. $\frac{1}{9}$ and $\frac{1}{3}$

**10** Longwei repairs his bicycle and needs a $\frac{3}{8}$-inch wrench. He has wrenches that are $\frac{3}{16}$ inch, $\frac{4}{16}$ inch, $\frac{5}{16}$ inch, and $\frac{6}{16}$ inch. Which wrench is equivalent to $\frac{3}{8}$ inch?

A. $\frac{3}{16}$ in.

B. $\frac{4}{16}$ in.

C. $\frac{5}{16}$ in.

D. $\frac{6}{16}$ in.

**11** Tommy receives the same grade on two tests. He scores 8 out of 10 on the first test. What does Tommy score on his second test to make the grades equivalent?

A. 24 out of 27

B. 20 out of 25

C. 21 out of 24

D. 18 out of 21

**12** A recipe requires $\frac{5}{8}$ cup of flour. Which measure is equivalent to $\frac{5}{8}$ cup?

A. $\frac{10}{16}$ cup

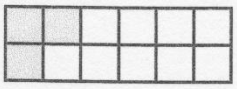
B. $\frac{9}{16}$ cup

C. $\frac{8}{16}$ cup

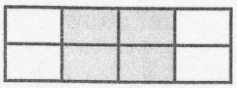
D. $\frac{7}{16}$ cup

**13** Which two fraction models have the same area shaded?

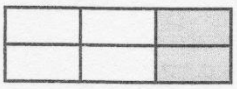
Model A



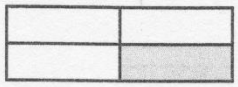
Model B



Model C



Model D



A. A and B

B. B and C

C. C and D

D. A and D

**14** Which two numbers make the equation true?

$$\frac{1}{3} = \frac{\square}{15} = \frac{6}{\square}$$

A. numerator of 3

B. numerator of 4

C. numerator of 5

D. denominator of 17

E. denominator of 18

F. denominator of 19

**15** Rosita completes $\frac{3}{4}$ of a test in the allotted time. Gilberto completes the same amount of his test in the allotted time. What fraction of his test does Gilberto complete?

A. $\frac{10}{16}$

B. $\frac{12}{16}$

C. $\frac{10}{18}$

D. $\frac{12}{18}$

**16** Paki and Tarq run the same distance in a relay race. Paki runs $\frac{4}{12}$ kilometer. How far does Tarq run?

A. $\frac{1}{6}$ km

B. $\frac{1}{5}$ km

C. $\frac{1}{4}$ km

D. $\frac{1}{3}$ km

# Math-E - Lesson 26 – Equivalent Fractions

## Practice 26 Equivalent Fractions

pp. 58–59 (3.NF.3.a)

1. C. The number that makes the equation $\frac{1}{6} = \frac{\square}{18}$ true is 3: $\frac{1}{6} = \frac{3}{18}$.
2. A. The fraction on the number line that is directly above $\frac{1}{4}$ is $\frac{2}{8}$.
3. B, E. The fraction model for tenths shows $\frac{4}{10}$ shaded. The fractions equivalent to $\frac{4}{10}$ are $\frac{8}{20}$ and $\frac{2}{5}$.
4. C. The fraction equivalent to $\frac{1}{9}$ is $\frac{2}{18}$. Sydney saves $\frac{2}{18}$ of her salary each pay period.
5. B. The fraction model equivalent to $\frac{7}{9}$ is the fraction model for $\frac{14}{18}$: $\frac{(7 \times 2)}{(9 \times 2)} = \frac{14}{18}$.
6. A. The fraction equivalent to $\frac{3}{12}$, $\frac{2}{8}$, and $\frac{1}{4}$ is $\frac{5}{20}$. Darlene eats $\frac{5}{20}$ of her granola bar.
7. C. The fraction equivalent to $\frac{3}{9}$ and $\frac{2}{6}$ is $\frac{1}{3}$. Lanelle paints $\frac{1}{3}$ of her bedroom on Thursday.
8. D. The fraction equivalent to $\frac{8}{14}$ is $\frac{4}{7}$.
9. A. The two fractions that are equivalent are the fractions that label the same distance from 0, $\frac{9}{9}$ and $\frac{3}{3}$.
10. D. The fraction equivalent to $\frac{3}{8}$ is $\frac{6}{16}$. Longwei needs a $\frac{6}{16}$-inch wrench.
11. B. The fraction equivalent to $\frac{8}{10}$ is $\frac{20}{25}$. Tommy scores 20 out of 25 on his second test.
12. A. The fraction equivalent to $\frac{5}{8}$ is $\frac{10}{16}$. The measure that is equivalent to $\frac{5}{8}$ cup is $\frac{10}{16}$ cup.
13. D. Fraction model A shows $\frac{3}{12}$ shaded. Fraction model D shows $\frac{1}{4}$ shaded. $\frac{3}{12}$ is equivalent to $\frac{1}{4}$.
14. C, E The fractions equivalent to $\frac{1}{3}$ are $\frac{5}{15}$ and $\frac{6}{18}$: $\frac{(1 \times 5)}{(3 \times 5)} = \frac{5}{15}$ and $\frac{(1 \times 6)}{(3 \times 6)} = \frac{6}{18}$.
15. B. The fraction equivalent to $\frac{3}{4}$ is $\frac{12}{16}$. Gilberto completes $\frac{12}{16}$ of his test.
16. D. The fraction equivalent to $\frac{4}{12}$ is $\frac{1}{3}$. Tarq runs $\frac{1}{3}$ kilometer.