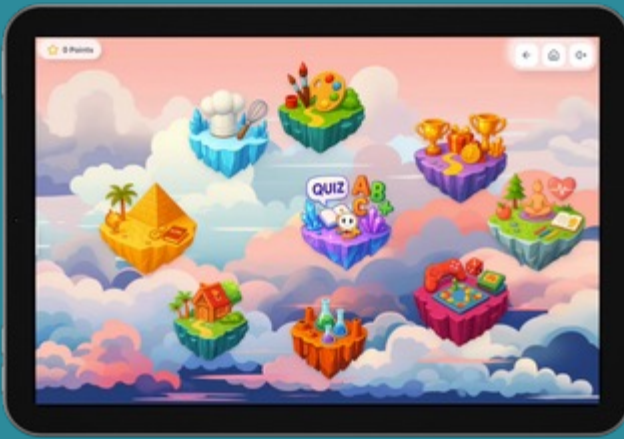


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Equivalent Fractions - Year 4

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Equivalent Fractions

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

$\frac{1}{2}$



$\frac{2}{4}$



$\frac{4}{8}$



Same amount, different names



Multiply or divide the numerator and denominator by the same number.

The value stays the same.

Folding Fraction Lab



Cut around each shape. Fold carefully along the dotted lines.



Circle

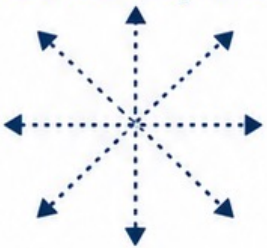
1. Fold in halves



2. Fold in quarters



3. Fold in eighths



Square

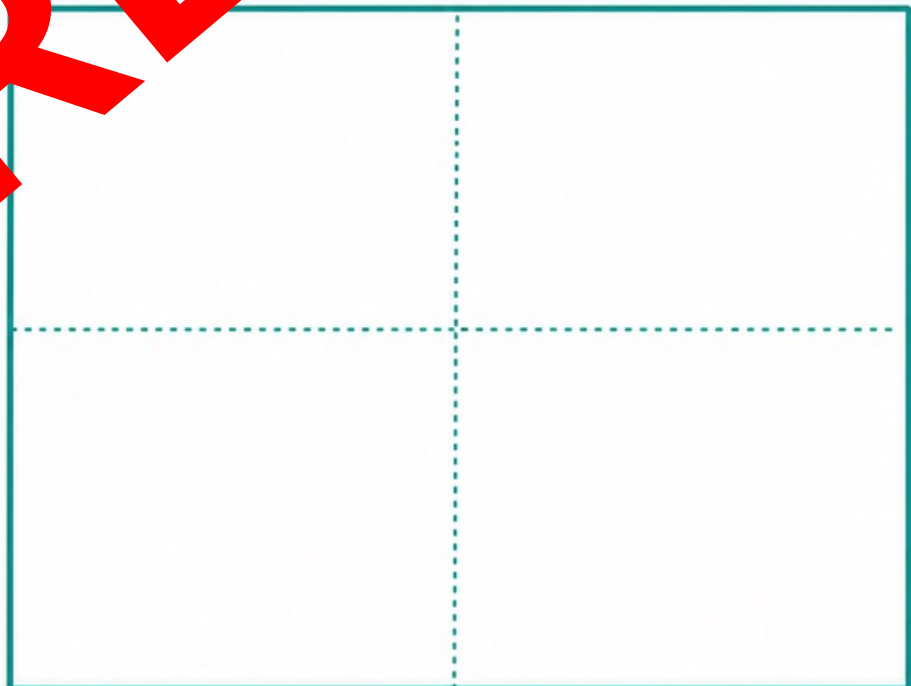
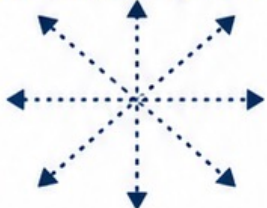
1. Fold in halves



2. Fold in quarters



3. Fold in eighths



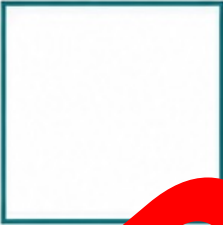
Make equal parts. Each fold creates a new equivalent fraction.

Folding Fraction Lab:

Record and Explain

Name: _____

1							
$\frac{1}{2}$				$\frac{1}{2}$			
$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$	
$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{8}$
$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{16}$

Shape	Original fraction	After first fold	After second fold	Equivalent fraction
Circle 				
Square 				



What stayed the same as the number of equal parts changed?



2. Write one equivalent-fraction family you made.



Fraction Fishing Match Game

How to play

1. Cut out the fish cards.
2. Mix the cards and place them face down.
3. Take turns choosing a fish.
4. Place it in the matching fraction family.
5. Check the family. Keep the fish if it belongs.

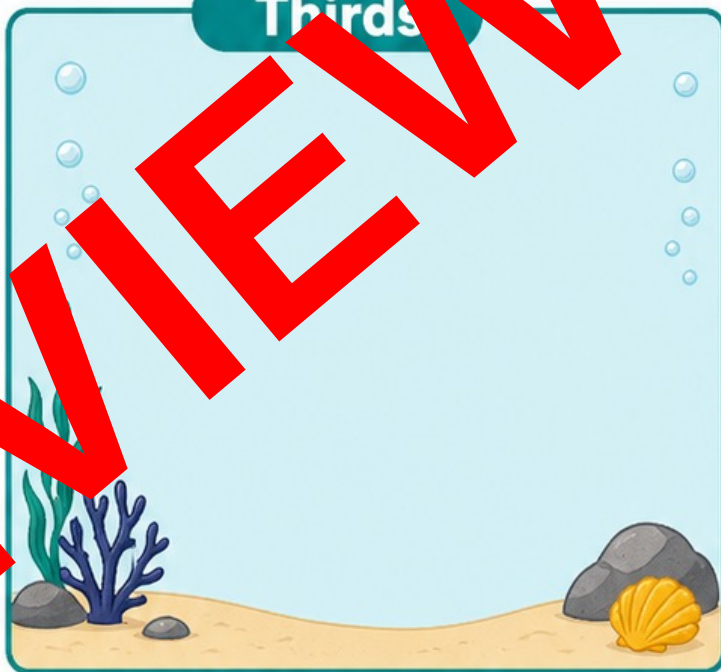
The player with the most fish wins.



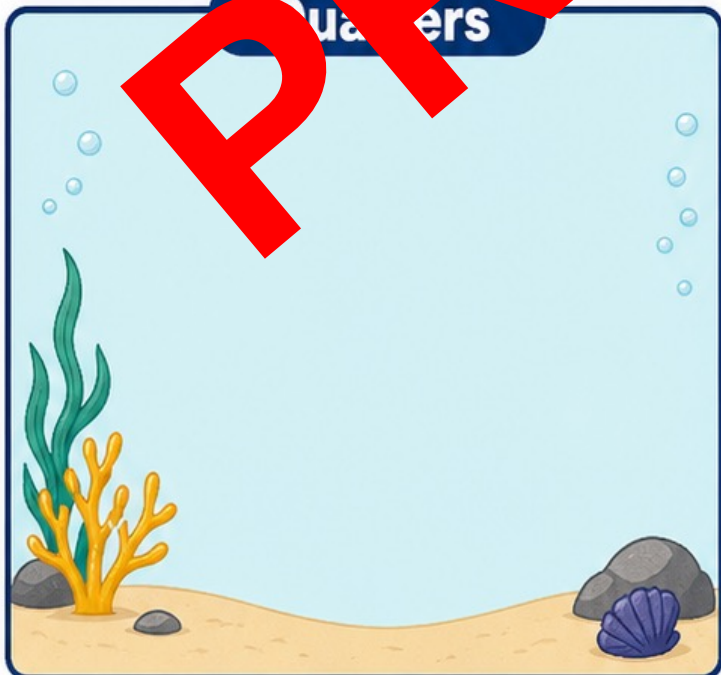
Halves



Thirds



Quarters



Fifths



Fraction Fishing Cards

Cut along the dashed lines.



Pizza Fraction Family Puzzles

How to play

- 1 Cut out the topping cards.
- 2 Choose a pizza base.
- 3 Find every fraction that belongs to its family.
- 4 Place the matching toppings on the pizza.



Check each fraction by multiplying or dividing both parts by the same number.

$\frac{1}{2}$ family

$\frac{1}{3}$ family

$\frac{1}{4}$ family

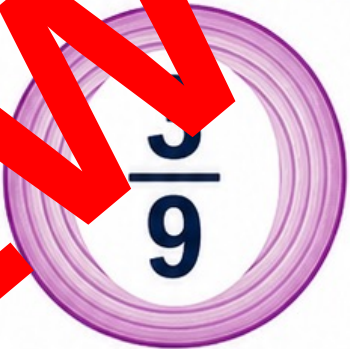
$\frac{1}{5}$ family



Pizza Fraction Topping Cards



Cut along the dashed lines.

 $\frac{1}{2}$	 $\frac{2}{4}$	 $\frac{3}{6}$	 $\frac{5}{10}$
 $\frac{6}{12}$	 $\frac{1}{3}$	 $\frac{2}{5}$	 $\frac{3}{9}$
 $\frac{4}{12}$	 $\frac{6}{15}$	 $\frac{1}{4}$	 $\frac{2}{8}$
 $\frac{3}{12}$	 $\frac{4}{16}$	 $\frac{6}{24}$	 $\frac{1}{5}$
 $\frac{2}{10}$	 $\frac{3}{15}$	 $\frac{4}{20}$	 $\frac{6}{30}$

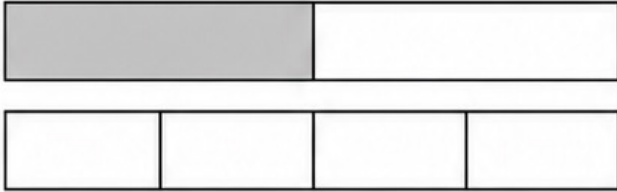
PREVIEW

Name: _____

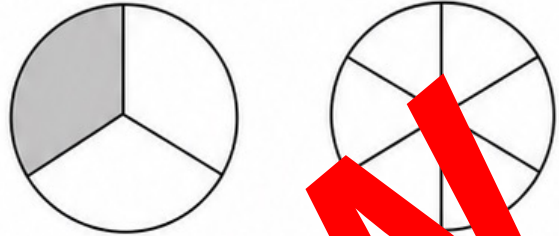
Build Equivalent Fractions: Visual Models

 Shade the second model to show the same amount. Then complete the equivalent fraction.

1. $\frac{1}{2} = \frac{\quad}{4}$



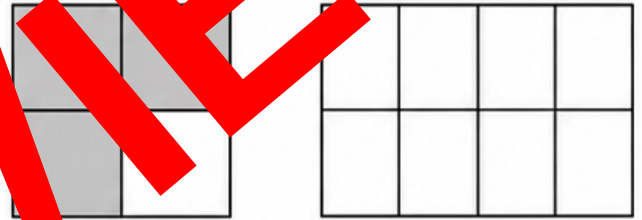
2. $\frac{1}{3} = \frac{\quad}{6}$



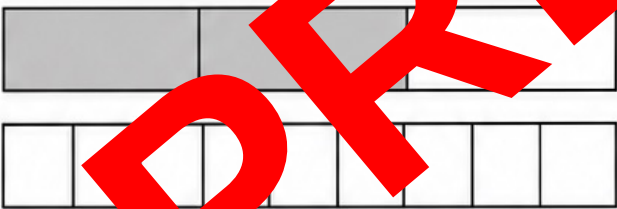
3. $\frac{2}{5} = \frac{\quad}{10}$



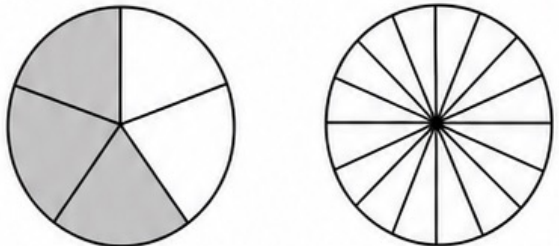
4. $\frac{3}{4} = \frac{\quad}{8}$



5. $\frac{2}{3} = \frac{\quad}{9}$



6. $\frac{3}{5} = \frac{\quad}{15}$



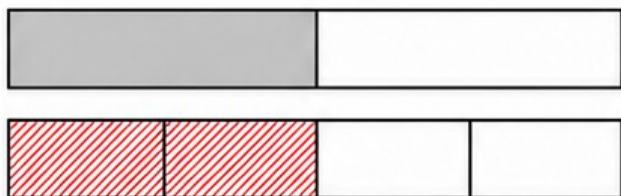
 **Explain:** How do the models prove the fractions are equivalent?

Name: **ANSWERS**

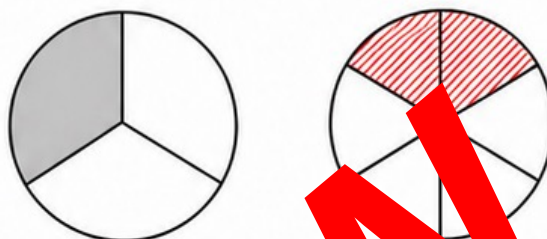
Build Equivalent Fractions: Visual Models

 Shade the second model to show the same amount. Then complete the equivalent fraction.

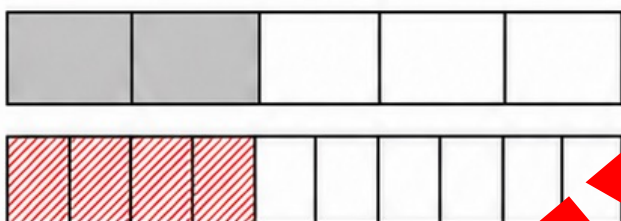
1. $\frac{1}{2} = \frac{2}{4}$



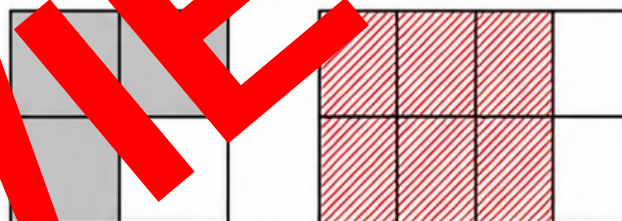
2. $\frac{1}{3} = \frac{2}{6}$



3. $\frac{2}{5} = \frac{4}{10}$



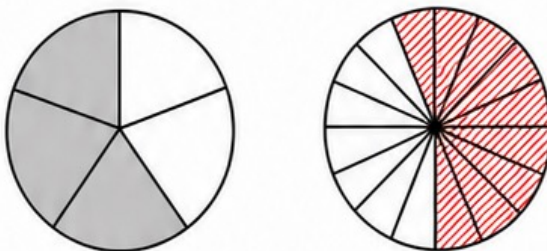
4. $\frac{3}{4} = \frac{6}{8}$



5. $\frac{2}{3} = \frac{6}{9}$



6. $\frac{3}{5} = \frac{9}{15}$



 **Explain:** How do the models prove the fractions are equivalent?

— Each pair shades the same amount of the whole. The —
— numerator and denominator were multiplied by the —
— same number, so the fraction's value did not change. —
—
—
—

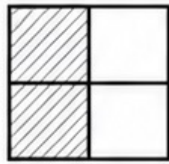
Build Equivalent Fractions: Number Strategies

Name: _____



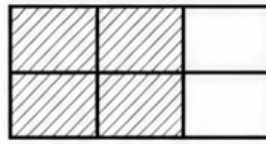
$$\frac{2}{3}$$

x



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

=



$$\frac{4}{6}$$

Multiply both parts by the shown factor. Write the new numerator and denominator.

1. $\frac{1}{2} \times \frac{2}{2} =$ _____

7. $\frac{3}{8} \times \frac{3}{3} =$ _____

2. $\frac{2}{3} \times \frac{3}{3} =$ _____

8. $\frac{2}{10} \times \frac{2}{2} =$ _____

3. $\frac{3}{4} \times \frac{2}{2} =$ _____

9. $\frac{5}{6} \times \frac{5}{5} =$ _____

4. $\frac{2}{5} \times \frac{4}{4} =$ _____

10. $\frac{5}{9} \times \frac{4}{4} =$ _____

5. $\frac{4}{7} \times \frac{3}{3} =$ _____

11. $\frac{4}{11} \times \frac{2}{2} =$ _____

6. $\frac{1}{6} \times \frac{2}{2} =$ _____

12. $\frac{7}{12} \times \frac{3}{3} =$ _____

Why does multiplying by $\frac{2}{2}$, $\frac{3}{3}$ or $\frac{4}{4}$ keep the value the same?

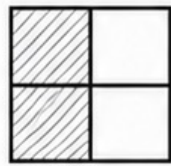
Build Equivalent Fractions: Number Strategies

Name: **ANSWERS**



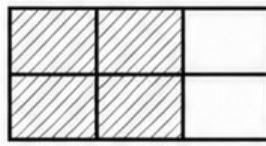
$$\frac{2}{3}$$

x



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

=



$$\frac{4}{6}$$

Multiply both parts by the shown factor. Write the new numerator and denominator.

1. $\frac{1}{2} \times \frac{2}{2} = \frac{2}{4}$

7. $\frac{3}{8} \times \frac{3}{3} = \frac{9}{24}$

2. $\frac{2}{3} \times \frac{3}{3} = \frac{6}{9}$

8. $\frac{2}{10} \times \frac{7}{7} = \frac{14}{70}$

3. $\frac{3}{4} \times \frac{2}{2} = \frac{6}{8}$

9. $\frac{5}{6} \times \frac{5}{5} = \frac{25}{30}$

4. $\frac{2}{5} \times \frac{4}{4} = \frac{8}{20}$

10. $\frac{5}{9} \times \frac{4}{4} = \frac{20}{36}$

5. $\frac{4}{7} \times \frac{3}{3} = \frac{12}{21}$

11. $\frac{4}{11} \times \frac{2}{2} = \frac{8}{22}$

6. $\frac{5}{6} \times \frac{2}{2} = \frac{10}{12}$

12. $\frac{7}{12} \times \frac{3}{3} = \frac{21}{36}$

Why does multiplying by $\frac{2}{2}$, $\frac{3}{3}$ or $\frac{4}{4}$ keep the value the same?

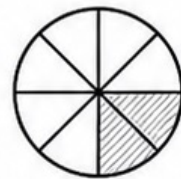
Each multiplier is equal to one. It scales the numerator and denominator by the same factor, so the value stays the same.

Multiply to Match



Name: _____

Multiply the numerator and denominator by the same number to complete each equivalent fraction.



1. $\frac{1}{2} = \frac{\quad}{8}$

2. $\frac{2}{3} = \frac{\quad}{12}$

3. $\frac{3}{5} = \frac{\quad}{20}$

4. $\frac{4}{\quad} = \frac{\quad}{21}$

5. $\frac{5}{8} = \frac{\quad}{24}$

6. $\frac{\quad}{9} = \frac{\quad}{27}$

7. $\frac{2}{5} = \frac{14}{\quad}$

8. $\frac{3}{4} = \frac{18}{\quad}$

9. $\frac{5}{\quad} = \frac{20}{\quad}$

10. $\frac{4}{11} = \frac{12}{\quad}$

11. $\frac{7}{12} = \frac{21}{\quad}$

12. $\frac{9}{10} = \frac{45}{\quad}$

Whatever you do to the numerator, do the same to the denominator.

Multiply to Match



Name: ANSWERS

Multiply the numerator and denominator by the same number to complete each equivalent fraction.



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

2. $\frac{2}{3} = \frac{8}{12}$

3. $\frac{3}{5} = \frac{12}{20}$

4. $\frac{4}{7} = \frac{8}{21}$

5. $\frac{5}{8} = \frac{15}{24}$

6. $\frac{7}{9} = \frac{21}{27}$

7. $\frac{2}{5} = \frac{14}{35}$

8. $\frac{3}{4} = \frac{18}{24}$

9. $\frac{5}{6} = \frac{20}{24}$

10. $\frac{4}{11} = \frac{12}{33}$

11. $\frac{7}{12} = \frac{21}{36}$

12. $\frac{9}{10} = \frac{45}{50}$

Whatever you do to the numerator, do the same to the denominator.

Divide and Simplify



Name: _____



Divide the **numerator** and denominator by the same factor.
Write each fraction in lowest terms.

1. $\frac{6}{8}$ _____
Divided by: _____

6. $\frac{16}{28}$ _____
Divided by: _____

2. $\frac{8}{12}$ _____
Divided by: _____

7. $\frac{8}{24}$ _____
Divided by: _____

3. $\frac{9}{15}$ _____
Divided by: _____

8. $\frac{20}{30}$ _____
Divided by: _____

4. $\frac{12}{18}$ _____
Divided by: _____

9. $\frac{25}{35}$ _____
Divided by: _____

5. $\frac{15}{20}$ _____
Divided by: _____

10. $\frac{32}{40}$ _____
Divided by: _____

How do you know when a fraction is in lowest terms?

Divide and Simplify



Name: ANSWERS



Divide the **numerator** and denominator by the same factor.
Write each fraction in lowest terms.

1. $\frac{6}{8}$ $\frac{3}{4}$
Divided by: 2

6. $\frac{16}{28}$ $\frac{4}{7}$
Divided by: 4

2. $\frac{8}{12}$ $\frac{2}{3}$
Divided by: 4

7. $\frac{8}{12}$ $\frac{2}{3}$
Divided by: 6

3. $\frac{9}{15}$ $\frac{3}{5}$
Divided by: 3

8. $\frac{20}{30}$ $\frac{2}{3}$
Divided by: 10

4. $\frac{12}{16}$ $\frac{3}{4}$
Divided by: 4

9. $\frac{25}{35}$ $\frac{5}{7}$
Divided by: 5

5. $\frac{15}{20}$ $\frac{3}{4}$
Divided by: 5

10. $\frac{32}{40}$ $\frac{4}{5}$
Divided by: 8

How do you know when a fraction is in lowest terms?

The numerator and denominator have no common factor greater than 1.

Common Denominator Connections

Name: _____

Rename each pair using the shared denominator. Then write $<$, $>$ or $=$.

1 $\frac{1}{2}$ and $\frac{1}{3}$

Shared denominator: 6

$$\frac{\quad}{6} \quad \text{and} \quad \frac{\quad}{6}$$
$$\frac{1}{2} \quad \text{—} \quad \frac{1}{3}$$

2 $\frac{1}{4}$ and $\frac{1}{6}$

Shared denominator: 12

$$\frac{\quad}{12} \quad \text{and} \quad \frac{\quad}{12}$$
$$\frac{1}{4} \quad \text{—} \quad \frac{1}{6}$$

3 $\frac{2}{3}$ and $\frac{1}{4}$

Shared denominator: 12

$$\frac{\quad}{12} \quad \text{and} \quad \frac{\quad}{12}$$
$$\frac{2}{3} \quad \text{—} \quad \frac{1}{4}$$

4 $\frac{3}{5}$ and $\frac{1}{2}$

Shared denominator: 10

$$\frac{\quad}{10} \quad \text{and} \quad \frac{\quad}{10}$$
$$\frac{3}{5} \quad \text{—} \quad \frac{1}{2}$$

5 $\frac{3}{4}$ and $\frac{2}{3}$

Shared denominator: 12

$$\frac{\quad}{12} \quad \text{and} \quad \frac{\quad}{12}$$
$$\frac{3}{4} \quad \text{—} \quad \frac{2}{3}$$

6 $\frac{5}{6}$ and $\frac{3}{4}$

Shared denominator: 12

$$\frac{\quad}{12} \quad \text{and} \quad \frac{\quad}{12}$$
$$\frac{5}{6} \quad \text{—} \quad \frac{3}{4}$$

Common Denominator Connections

Name: ANSWERS

Rename each pair using the shared denominator. Then write $<$, $>$ or $=$.

1 $\frac{1}{2}$ and $\frac{1}{3}$

Shared denominator: 6

$\frac{3}{6}$ and $\frac{2}{6}$

$\frac{1}{2} > \frac{1}{3}$

2 $\frac{1}{4}$ and $\frac{1}{6}$

Shared denominator: 12

$\frac{3}{12}$ and $\frac{2}{12}$

$\frac{1}{4} > \frac{1}{6}$

3 $\frac{2}{3}$ and $\frac{1}{4}$

Shared denominator: 12

$\frac{8}{12}$ and $\frac{3}{12}$

$\frac{2}{3} > \frac{1}{4}$

4 $\frac{3}{5}$ and $\frac{1}{2}$

Shared denominator: 10

$\frac{6}{10}$ and $\frac{5}{10}$

$\frac{3}{5} > \frac{1}{2}$

5 $\frac{3}{4}$ and $\frac{2}{3}$

Shared denominator: 12

$\frac{9}{12}$ and $\frac{8}{12}$

$\frac{3}{4} > \frac{2}{3}$

6 $\frac{5}{6}$ and $\frac{3}{4}$

Shared denominator: 12

$\frac{10}{12}$ and $\frac{9}{12}$

$\frac{5}{6} > \frac{3}{4}$

Mixed Equivalent Fractions Review

Name: _____

A. Circle the fraction that is NOT equivalent.



1. $\frac{1}{2}$, $\frac{2}{4}$, $\frac{3}{6}$, $\frac{4}{10}$

2. $\frac{2}{3}$, $\frac{4}{6}$, $\frac{6}{9}$, $\frac{8}{15}$

3. $\frac{3}{4}$, $\frac{6}{8}$, $\frac{9}{12}$, $\frac{12}{15}$

B. Complete each equivalent fraction.

4. $\frac{1}{3} = \frac{\quad}{12}$

5. $\frac{5}{6} = \frac{20}{\quad}$

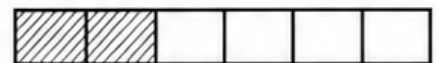
6. $\frac{\quad}{15} = \frac{3}{5}$

7. $\frac{14}{21} = \frac{\quad}{3}$

8. $\frac{4}{10} = \frac{2}{\quad}$

9. $\frac{7}{8} = \frac{\quad}{24}$

C. Simplify to lowest terms.



10. $\frac{10}{15} = \frac{\quad}{\quad}$

11. $\frac{18}{30} = \frac{\quad}{\quad}$

12. $\frac{28}{42} = \frac{\quad}{\quad}$

Mia says $\frac{2}{3} = \frac{6}{12}$. Is she correct? Explain.

Mixed Equivalent Fractions Review

Name: ANSWERS

A. Circle the fraction that is NOT equivalent.



1. $\frac{1}{2}$, $\frac{2}{4}$, $\frac{3}{6}$, $\frac{4}{10}$

2. $\frac{2}{3}$, $\frac{4}{6}$, $\frac{6}{9}$, $\frac{8}{15}$

3. $\frac{3}{4}$, $\frac{6}{8}$, $\frac{9}{12}$, $\frac{12}{15}$

B. Complete each equivalent fraction.

4. $\frac{1}{3} = \frac{4}{12}$

5. $\frac{5}{6} = \frac{20}{24}$

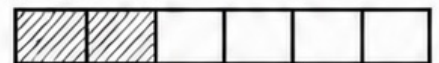
6. $\frac{9}{15} = \frac{3}{5}$

7. $\frac{14}{21} = \frac{2}{3}$

8. $\frac{4}{10} = \frac{2}{5}$

9. $\frac{7}{8} = \frac{21}{24}$

C. Simplify to lowest terms.



10. $\frac{10}{15} = \frac{2}{3}$

11. $\frac{18}{30} = \frac{3}{5}$

12. $\frac{28}{42} = \frac{2}{3}$

Mia says $\frac{2}{3} = \frac{6}{12}$. Is she correct? Explain.

No. To make twelfths, multiply both parts of $\frac{2}{3}$ by 4:

$$\frac{2}{3} = \frac{8}{12}$$

Mia changed the numerator and denominator by different factors.

Fraction Gallery Assessment — Part A

Name: _____

Score: ____ / 12

1. Complete: $\frac{1}{2} = \frac{\quad}{8}$

2. Complete: $\frac{2}{3} = \frac{\quad}{12}$

3. Complete: $\frac{3}{5} = \frac{\quad}{15}$

4. Complete: $\frac{4}{7} = \frac{12}{\quad}$

5. Circle the equivalent pair:

A. $\frac{2}{3}$ and $\frac{6}{8}$

B. $\frac{3}{4}$ and $\frac{9}{12}$

C. $\frac{2}{5}$ and $\frac{6}{10}$

6. Use the two blank fraction bars to show why $\frac{2}{4} = \frac{1}{2}$.

7. Draw fraction bars to prove $\frac{3}{5} = \frac{6}{10}$.

8. True or false? $\frac{4}{6} = \frac{8}{12}$. Explain how you know.

Fraction Gallery Assessment — Part A

Name: ANSWERS

Score: 12 / 12

1. Complete: $\frac{1}{2} = \frac{4}{8}$

2. Complete: $\frac{2}{3} = \frac{8}{12}$

3. Complete: $\frac{3}{5} = \frac{9}{15}$

4. Complete: $\frac{4}{7} = \frac{12}{21}$

5. Circle the equivalent pair:

A. $\frac{2}{3}$ and $\frac{6}{8}$

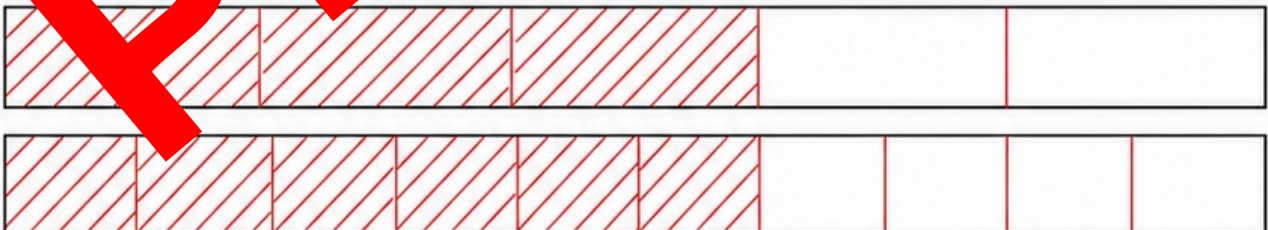
B. $\frac{3}{4}$ and $\frac{9}{12}$

C. $\frac{2}{5}$ and $\frac{6}{10}$

6. Use the two blank fraction bars to show why $\frac{2}{4} = \frac{1}{2}$.



7. Draw fraction bars to prove $\frac{3}{5} = \frac{6}{10}$.



8. True or false? $\frac{4}{6} = \frac{8}{12}$. Explain how you know.

True. $\frac{4}{6}$ simplifies to $\frac{2}{3}$ and $\frac{8}{12}$ also simplifies to $\frac{2}{3}$.

Fraction Gallery Assessment — Part B

Name: _____

Score: ____ / 12

Simplify to lowest terms.

9. $\frac{6}{9} = \underline{\hspace{2cm}}$

10. $\frac{12}{18} = \underline{\hspace{2cm}}$

11. $\frac{15}{25} = \underline{\hspace{2cm}}$

12. $\frac{21}{28} = \underline{\hspace{2cm}}$

Use equivalent fractions to compare. Write $<$, $>$ or $=$.

13. $\frac{2}{3} \text{ — } \frac{3}{4}$

14. $\frac{3}{5} \text{ — } \frac{1}{2}$

15. $\frac{5}{6} \text{ — } \frac{7}{9}$

16. $\frac{3}{4} \text{ — } \frac{9}{12}$

17. Liam says $\frac{2}{5} = \frac{4}{15}$ because he multiplied the numerator by 2 and the denominator by 3. Explain the error and correct the equation.

18. Write two fractions equivalent to $\frac{7}{8}$.

$\frac{7}{8} = \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

19. Three quarters of a ribbon is green. Jess describes the same amount as $\frac{9}{12}$. Is Jess correct? Show a calculation and explain.

Fraction Gallery Assessment — Part B

Name: ANSWERS

Score: 12 / 12

Simplify to lowest terms.

9. $\frac{6}{9} = \frac{2}{3}$

10. $\frac{12}{18} = \frac{2}{3}$

11. $\frac{15}{25} = \frac{3}{5}$

12. $\frac{21}{28} = \frac{3}{4}$

Use equivalent fractions to compare. Write $<$, $>$ or $=$.

13. $\frac{2}{3} < \frac{3}{4}$

14. $\frac{3}{5} > \frac{1}{2}$

15. $\frac{5}{6} > \frac{7}{9}$

16. $\frac{3}{4} < \frac{9}{10}$

17. Liam says $\frac{2}{5} = \frac{4}{15}$ because he multiplied the numerator by 2 and the denominator by 3. Explain the error and correct the equation.

Liam used different factors. Multiply both parts by 2: $\frac{2}{5} = \frac{4}{10}$, not $\frac{4}{15}$.

18. Write two fractions equivalent to $\frac{7}{8}$.

$$\frac{7}{8} = \frac{14}{16} = \frac{21}{24}$$

19. Three quarters of a ribbon is green. Jess describes the same amount as $\frac{9}{12}$. Is Jess correct? Show a calculation and explain.

Yes. $\frac{3}{4} \times \frac{3}{3} = \frac{9}{12}$, so both fractions describe the same amount.



Equivalent Fractions Rubric



Student: _____

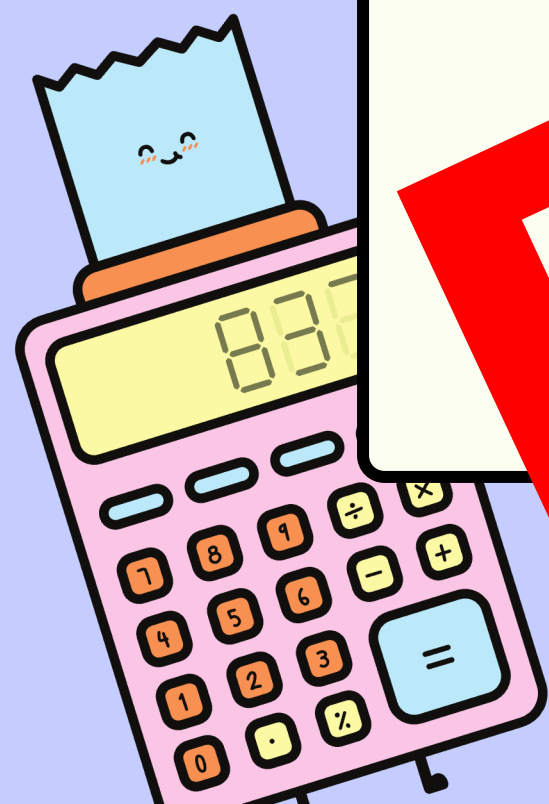
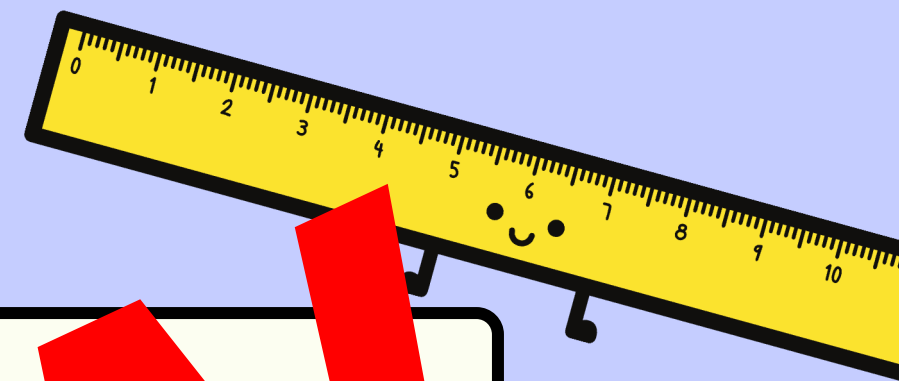
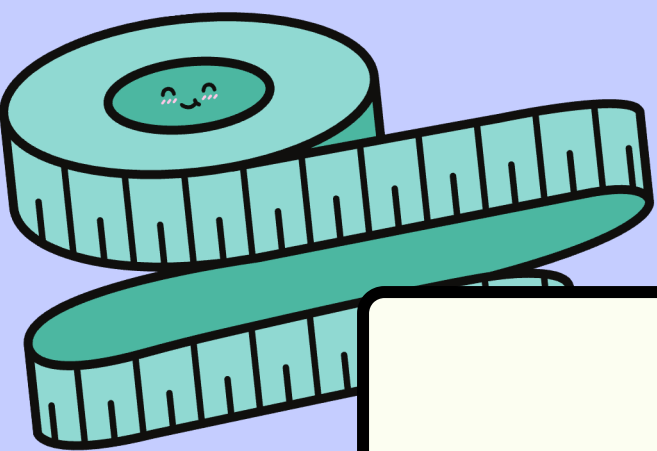
Date: _____

Overall level: _____

Criteria	BEGINNING	DEVELOPING	ACHIEVING	CONFIDENT	EXCEEDING
1. Recognises equivalent fractions	Needs support to identify matching values.	Identifies familiar examples with some accuracy.	Accurately identifies equivalent fractions.	Explains equivalence using models and symbols.	Justifies equivalence in more than one way.
2. Uses visual models	Models are incomplete or unclear.	Shows simple models with accuracy.	Uses accurate fraction bars or area models.	Connects accurate models to fraction notation.	Compares multiple models and explains them.
3. Generates equivalents	Changes only one part of a fraction.	Uses a given multiplier or divisor.	Scales numerator and denominator equally.	Generates and checks several equivalents.	Selects efficient factors and proves equivalence.
4. Simplifies fractions	Needs support to find a common factor.	Simplifies familiar fractions with prompts.	Simplifies lowest terms accurately.	Chooses efficient common factors independently.	Verifies lowest terms and explains the method.
5. Explains reasoning	Gives little mathematical explanation.	Gives a partly clear explanation.	Uses correct fraction language and evidence.	Connects models, calculations and reasoning.	Compares strategies and defends conclusions.
6. Accuracy and independence	Frequent errors; relies on support.	Mostly accurate with reminders.	Accurate on core tasks.	Accurate and independent on most tasks.	Precise, efficient and self-checking.

Teacher feedback: _____

Next step: _____



PREVIEW

Equivolent Reactions

A cartoon character of a notepad with a face, wearing a blue graduation cap and holding a yellow pencil, is located in the bottom-right corner of the central white box.

Same Amount, Different Names

One half can be renamed in many ways.

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

Each fraction covers the same amount of the whole.



What Does Equivalent Mean?

Equivalent fractions have equal value.

The numerator and denominator look different,
but they name the same point or shaded amount.



Fraction Refresher

Numerator: the number of equal parts chosen.

Denominator: the total number of equal parts in one whole.

Example: In $\frac{3}{5}$, 3 parts are chosen from 5 equal parts.



The One Rule

Multiply or divide the numerator and denominator
by the same non-zero whole number.
Do the same thing to both parts.



Build an Equivalent Fraction

Start with $\frac{2}{3}$.

$$\frac{2}{3} \times \frac{2}{2} =$$

Both parts were multiplied by 2, so the value stayed equal.



Build a Fraction Family

PREVIEW

$$3/5 \times 2 = 6/10$$

$$3/5 \times 3/3 = 9/15$$

$$\text{So } 3/5 \times 6/10 = 9/15.$$



Why Does the Value Stay the Same?

$\frac{2}{2}$ and $\frac{4}{4}$ each equal 1.

Multiplying by 1 changes the name,
not the amount.



Find a Missing Numerator

$$4/7 = 12/21$$

$12 \div 4 = 3$, so multiply the denominator by 3 too.

$4 \times 3 = 12$. Therefore, $4/7 = 12/21$.



Find a Missing Denominator

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

$5 \times 3 = 15$ so multiply the denominator by 3 too.

$8 \times 3 = 24$ Therefore, $\frac{5}{8} = \frac{15}{24}$.



Simplify by Dividing Both Parts

PREVIEW

$12/16$ divided by $4 = 3/4$

Divide both parts by same factor

Steps to fraction equal.



Lowest Terms

A fraction is in lowest terms when its numerator and denominator have no common number factor greater than 1.
Example: $\frac{3}{4}$ is already in lowest terms.



Equivalent or Not?

$6/8 = 3/4$ because both parts divide by 2.

$4/6$ is not equivalent to $2/10$ because the parts were not scaled by the same factor.

Always check the numerator and denominator together.



Common-Denominator Connection

PREVIEW

Remember $\frac{1}{2}$ and $\frac{1}{3}$ is sixths.

$\frac{1}{2} = \frac{3}{6}$ and $\frac{1}{3} = \frac{2}{6}$

Now the fair is easy to compare: $\frac{3}{6} > \frac{2}{6}$.



Guided Review

1. Complete: $2/3 = ?/10$

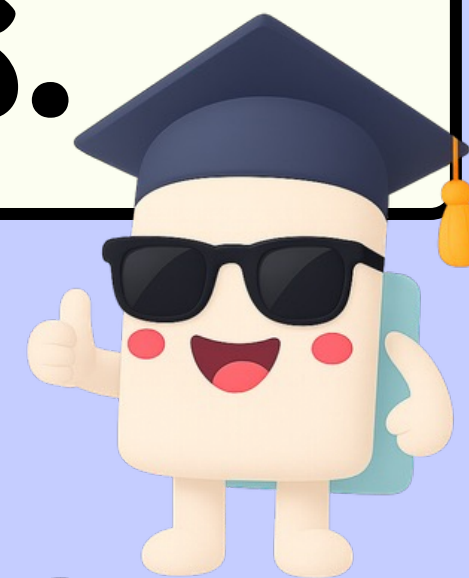
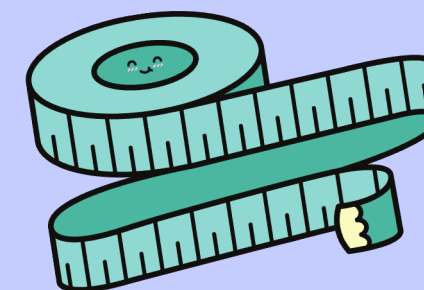
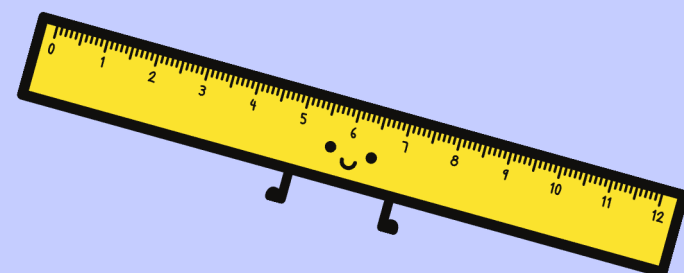
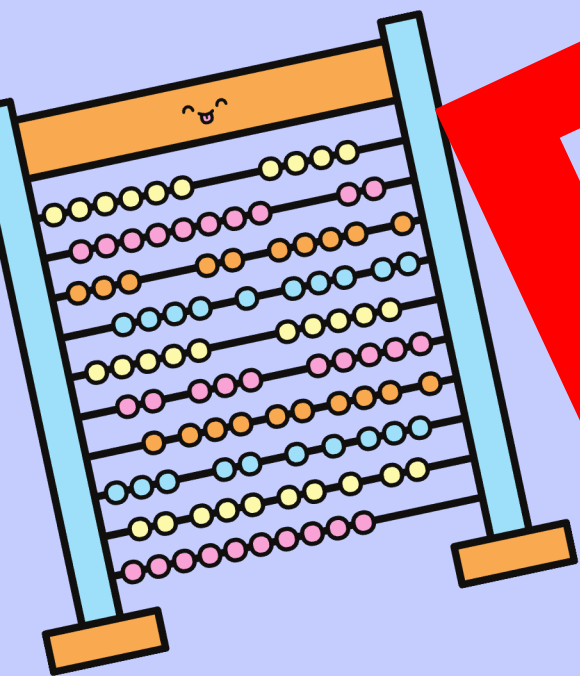
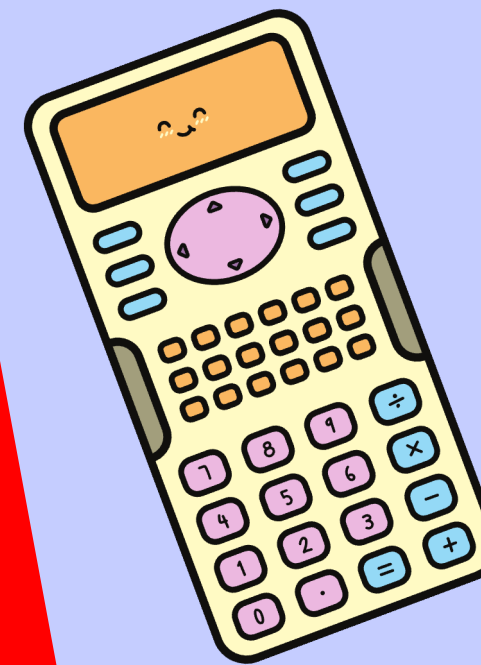
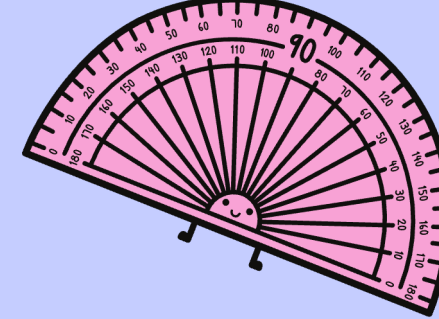
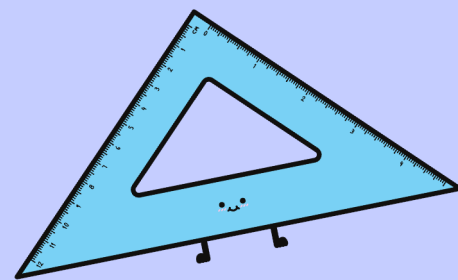
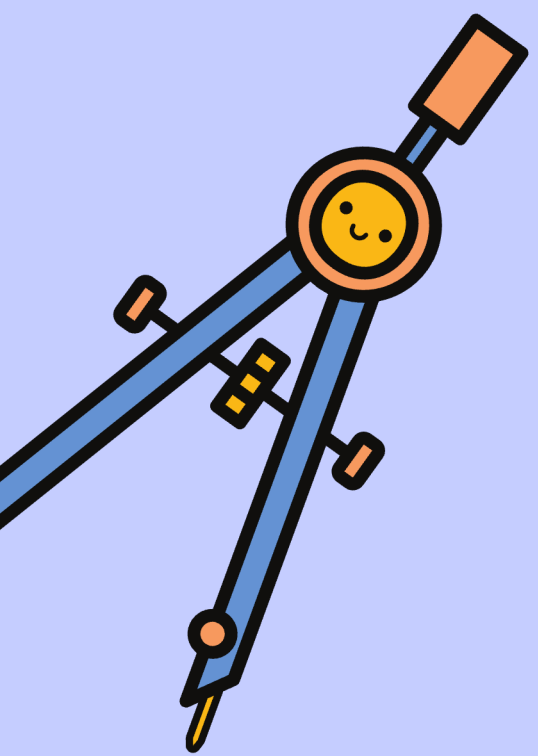
2. Complete: $3/4 = 9/?$

Simplify. $5/10$

True or false: $5/6 = 10/12$

Explain one answer to a partner.





Well Done!
Same amount,
different names.

PREVIEW

Equivalent Fractions

Quiz

PREVIEW



Question 1: True or False

$$\frac{3}{4} = \frac{6}{8}$$

True or false?

PREVIEW



Answer 1

PREVIEW

True

$$\frac{3}{4} \times \frac{2}{2} = \frac{6}{8}.$$



Question 2: Multiple Choice

Which fraction is equivalent to $\frac{2}{5}$?

A. $\frac{3}{10}$

B. $\frac{4}{10}$

C. $\frac{3}{20}$

D. $\frac{8}{25}$



Answer 2

PREVIEW

B. 4/

$$\frac{2}{5} \times \frac{2}{2} = \frac{4}{10}.$$



Question 3: Short Answer

PREVIEW

Completed 9/7/21

Show the factor you used.



Answer 3

PREVIEW

$9/2$

$7 \times 3 = 21$, so $3 \times 3 = 9$.



Question 4: Multiple Choice

What is the simplest form of $\frac{12}{16}$?

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

B. $\frac{4}{6}$

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

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



Answer 4

PREVIEW

C. 3,

Divide both parts of $12/16$ by 4.



Question 5: True or False

$\frac{4}{6} = \frac{2}{10}$

True or false?



Answer 5

PREVIEW

False

$\frac{4}{6}$ simplifies to $\frac{2}{3}$, while $\frac{8}{10}$ simplifies to $\frac{4}{5}$.



Question 6: Multiple Choice

A model has $\frac{3}{6}$ equal parts shaded.

What fraction is $\frac{3}{6}$ in lowest terms?

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

C. $\frac{2}{3}$ D. $\frac{3}{4}$



Answer 6

PREVIEW

B. 1.

$3/6$ divided by $3/3 = 1/2$.



Question 7: Short Answer

PREVIEW

Completed 7/8 7/24

Show the factor you used.



Answer 7

PREVIEW

$15/2$

$5 \times 3 = 24$, so $5 \times 3 = 15$.



Question 8: Multiple Choice

Which pairs are equivalent?

A. $\frac{1}{2}$ and $\frac{2}{3}$

B. $\frac{2}{3}$ and $\frac{8}{12}$

C. $\frac{3}{4}$ and $\frac{5}{20}$

D. $\frac{4}{7}$ and $\frac{8}{21}$



Answer 8

P. 2/3 and 3/4

$$\frac{2}{3} \times \frac{4}{4} = \frac{8}{12}.$$



Question 9: True or False

Dividing the numerator and denominator by the same non-zero whole number keeps the fraction's value.

True or false?



Answer 9

PREVIEW

True

Dividing both sides by the same factor renames the same value.



Question 10: Short Answer

PREVIEW

Simplify $\frac{6}{9}$ to lowest term.

Explain the division you used.



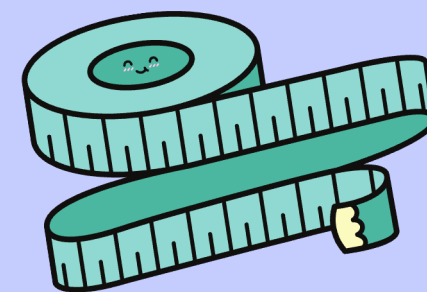
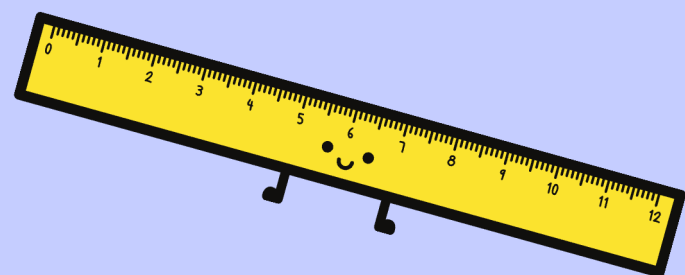
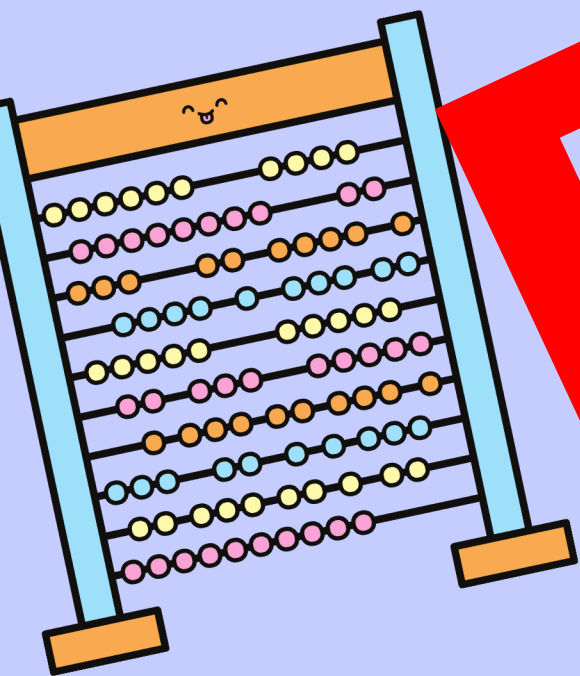
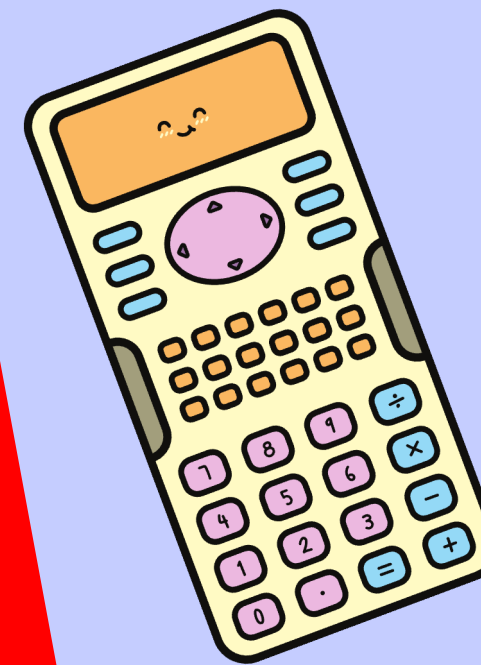
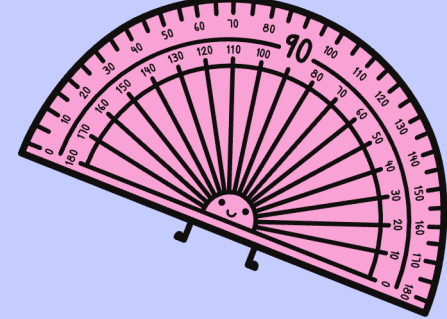
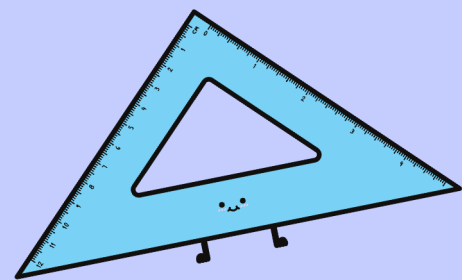
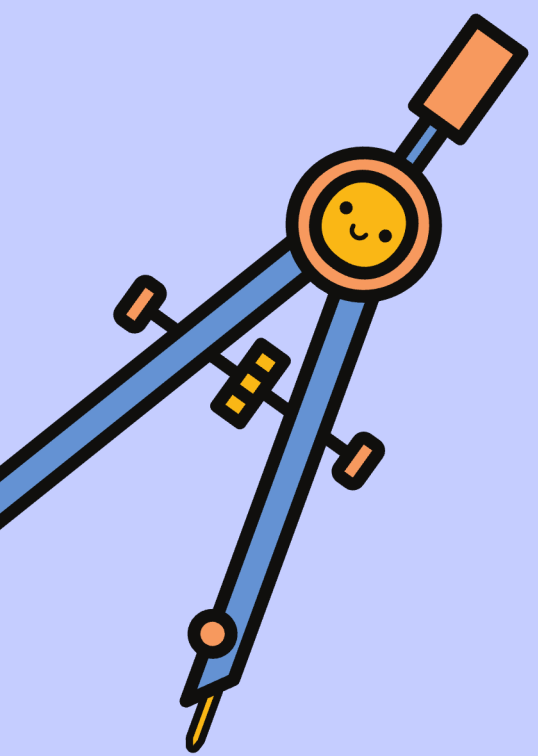
Answer 10

PREVIEW

2/3

Divide the numerator and denominator by 3.





Well Done!
You are an
quivalence expert

PREVIEW