Name & Surname: _____ Class: _____ Date: _____

Same Size Slices

Spot equivalent fractions in diagrams

About 45 minutes Level ★★★☆☆

Same value, more pieces

Equivalent fractions look different but show the **same** amount. You can see it in a diagram.

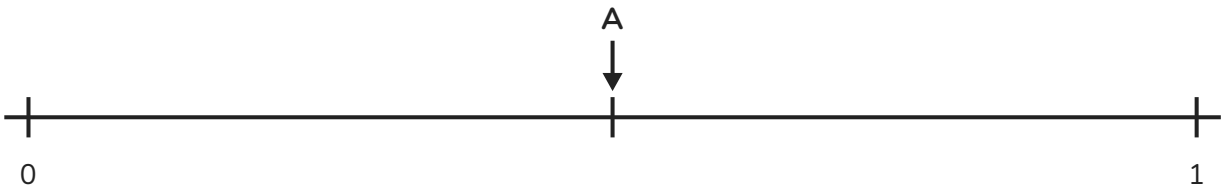
- $\frac{1}{2}$ means 1 of 2 equal parts is shaded.
- Cut each part into 2 smaller parts to make 4 parts. Now 2 parts are shaded: $\frac{2}{4}$.
- The shaded part is just as big, so $\frac{1}{2} = \frac{2}{4}$ is **equivalent**.

↑↓ Task A

/2

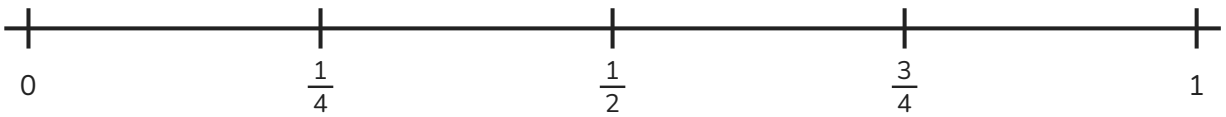
Arrow A points to $\frac{1}{2}$. Mark $\frac{2}{4}$ below and spot the equivalent pair.

1



A = ☐

2



Draw an arrow to show: $\frac{1}{2}$

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Halves and Quarters

Practise finding fractions equal to one half and one quarter.

Key words

equivalent: same value but different numbers

denominator: bottom number: equal parts in the whole

quarter: one of four equal parts

numerator: top number: parts we have

half: one of two equal parts

Task B

/10

Find equivalent fractions with halves, quarters and eighths.

WARM UP

1 Write the missing number: $\frac{1}{2} = _/4$

Answer: _____

2 Write the missing number: $\frac{1}{2} = _/6$

Answer: _____

3 Write the missing number: $\frac{1}{4} = _/8$

Answer: _____

4 Write the missing number: $\frac{2}{4} = _/2$

Answer: _____

PRACTISE

5 Write the missing number: $\frac{3}{4} = _/8$

Answer: _____

6 Write the missing number: $\frac{2}{2} = _/4$

Answer: _____

7 Which fraction is **equivalent** to $\frac{1}{2}$: $\frac{1}{4}$, $\frac{2}{4}$ or $\frac{1}{3}$?

Answer: _____

PROBLEM SOLVING

8 A chocolate bar is cut into 4 equal pieces. A student eats 2 pieces. Which fraction in **halves** shows the same amount?

Answer: _____

9 A paper strip is folded into 8 equal parts. A student colours 4 parts. Which fraction in **halves** shows the same amount?

Answer: _____

10 Explain how you know $\frac{1}{2}$ and $\frac{2}{4}$ are **equivalent**. Use the word shaded.

Answer: _____

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Thirds and Sixths

Practise finding fractions equal to one third and two thirds.

Task C

/10

Find equivalent fractions with thirds and sixths.

WARM UP

1 Write the missing number: $\frac{1}{3} = _/6$

Answer: _____

2 Write the missing number: $\frac{2}{3} = _/6$

Answer: _____

3 Write the missing number: $\frac{2}{6} = _/3$

Answer: _____

4 Write the missing number: $\frac{3}{3} = _/6$

Answer: _____

PRACTISE

5 Which fraction is **equivalent** to $\frac{2}{3}$: $\frac{2}{6}$, $\frac{4}{6}$ or $\frac{3}{6}$?

Answer: _____

6 Write the missing number: $\frac{4}{6} = _/3$

Answer: _____

7 A student says $\frac{2}{3} = \frac{3}{4}$ because she added 1 to the top and bottom. Is she right? Answer yes or no and explain why.

Answer: _____

PROBLEM SOLVING

8 Six friends share pizzas cut into 6 equal slices. A student eats 2 slices. Which fraction in **thirds** shows the same amount?

Answer: _____

9 A ribbon 1 m long is cut into 6 equal pieces. A student uses 4 pieces. Which fraction in **thirds** shows the same length?

Answer: _____

10 Explain how you know $\frac{1}{3}$ and $\frac{2}{6}$ are **equivalent**. Use the word diagram.

Answer: _____

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Shade and Sort

Shade bars to show equivalent fractions, then sort them.

Task D

/4

Shade the same amount on more parts to show equivalent fractions.

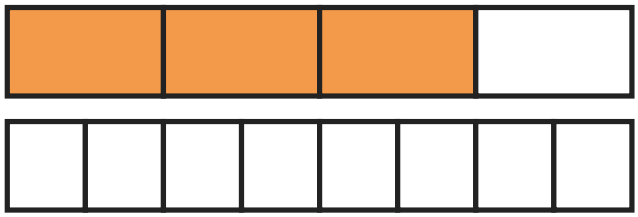
1



$= \frac{1}{2}$

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

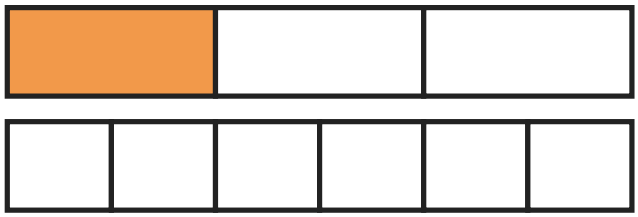
2



$= \frac{3}{4}$

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

3



$= \frac{1}{3}$

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

4



$\frac{1}{2}$

$\frac{2}{4}$

$\frac{1}{2} \square \frac{2}{4}$ Write <, > or =

Task E

Example done for you

/5

Sort the fractions. Remember: changing only the top number does not make them equivalent.

● **Equivalent to $\frac{1}{2}$**: colour it blue or draw ●

▲ **Not equivalent to $\frac{1}{2}$**: colour it orange or draw ▲

$\frac{2}{4}$ ●	$\frac{3}{6}$	$\frac{4}{8}$	$\frac{1}{4}$
$\frac{2}{3}$	$\frac{1}{3}$		

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Link and Check

Link fractions, then use the method again.

⁒ Task F

/8

Fill the missing fractions, decimals and percentages. The first rows match your bars.

Fraction	Decimal	Percentage
$\frac{1}{2}$		
$\frac{1}{4}$		
$\frac{3}{4}$		
		50%

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Same Size Slices

Task G

/2

Use the bar method to find the missing number.

WORKED EXAMPLE

Find the missing number: $\frac{1}{2} = ?/4$

1. Draw a bar with 2 equal parts and shade 1 to show $\frac{1}{2}$.
2. Cut each part into 2 to make 4 equal parts.
3. Count the shaded small parts: 2, so $\frac{1}{2} = \frac{2}{4}$.

Answer: 2

YOUR TURN

Find the missing number: $\frac{1}{2} = ?/8$

Answer: _____

WORKED EXAMPLE

Find the missing number: $\frac{1}{3} = ?/6$

1. Draw a bar with 3 equal parts and shade 1 to show $\frac{1}{3}$.
2. Cut each part into 2 to make 6 equal parts.
3. Count the shaded small parts: 2, so $\frac{1}{3} = \frac{2}{6}$.

Answer: 2

YOUR TURN

Find the missing number: $\frac{2}{3} = ?/6$

Answer: _____

How did I do?

Circle a face for each line.

I can recognise equivalent fractions with small denominators.

I can show equivalent fractions using diagrams.

I can explain how I know two fractions are equivalent.

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Answer sheet: Same Size Slices

Task A

1. A = $\frac{1}{2}$
2. arrows at $\frac{1}{2}$

Task B

1. 2
2. 3
3. 2
4. 1
5. 6
6. 4
7. $\frac{2}{4}$
8. $\frac{1}{2}$
9. $\frac{1}{2}$
10. They have the same amount shaded even though the number of parts is different.

Task C

1. 2
2. 4
3. 1
4. 6
5. $\frac{4}{6}$
6. 2
7. No, adding 1 to the top and bottom does not keep the value the same.
8. $\frac{1}{3}$
9. $\frac{2}{3}$
10. The diagram shows the same amount shaded with 3 parts and with 6 parts.

Task D

1. $\frac{1}{2} = \frac{2}{4}$ (shade 2 parts)
2. $\frac{3}{4} = \frac{6}{8}$ (shade 6 parts)
3. $\frac{1}{3} = \frac{2}{6}$ (shade 2 parts)
4. $\frac{1}{2} = \frac{2}{4}$

Task E

Equivalent to $\frac{1}{2}$ (blue ●): $\frac{2}{4}$, $\frac{3}{6}$, $\frac{4}{8}$

Not equivalent to $\frac{1}{2}$ (orange ▲): $\frac{1}{4}$, $\frac{2}{3}$, $\frac{1}{3}$

Task F

1. $\frac{1}{2}$ = 0.5 = 50%
2. $\frac{1}{4}$ = 0.25 = 25%
3. $\frac{3}{4}$ = 0.75 = 75%
4. $\frac{1}{2}$ = 0.5 = 50%

Task G

1. 4
2. 4

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