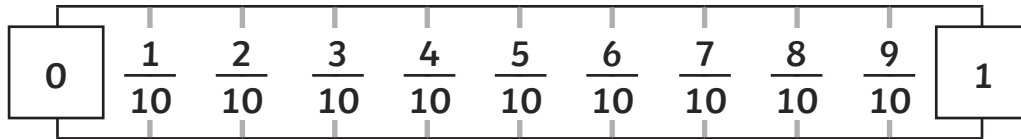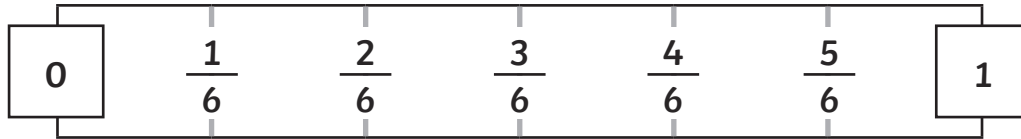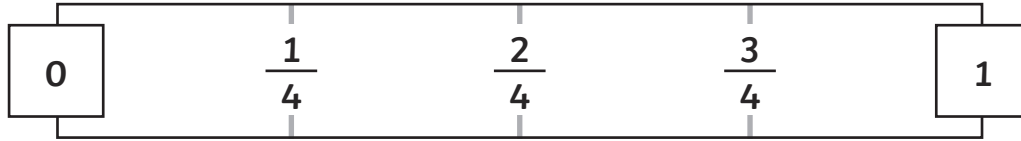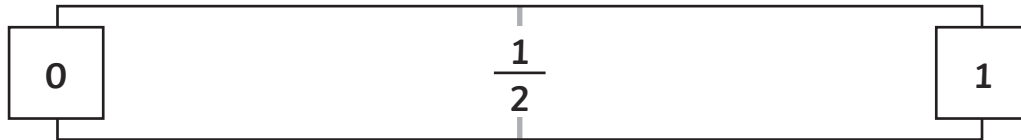# Equivalent Fractions

Using the fraction lines on the left, work out the equivalent fractions:

| 0 | $\frac{1}{2}$ | 1 |

| 0 | $\frac{1}{3}$ | $\frac{2}{3}$ | 1 |

| 0 | $\frac{1}{4}$ | $\frac{2}{4}$ | $\frac{3}{4}$ | 1 |

| 0 | $\frac{1}{5}$ | $\frac{2}{5}$ | $\frac{3}{5}$ | $\frac{4}{5}$ | 1 |

| 0 | $\frac{1}{6}$ | $\frac{2}{6}$ | $\frac{3}{6}$ | $\frac{4}{6}$ | $\frac{5}{6}$ | 1 |

| 0 | $\frac{1}{10}$ | $\frac{2}{10}$ | $\frac{3}{10}$ | $\frac{4}{10}$ | $\frac{5}{10}$ | $\frac{6}{10}$ | $\frac{7}{10}$ | $\frac{8}{10}$ | $\frac{9}{10}$ | 1 |

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

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

3. $\frac{1}{5} = \frac{\square}{10}$

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

5. $\frac{1}{2} = \frac{\square}{10}$

6. $\frac{4}{5} = \frac{\square}{10}$

7. $\frac{4}{10} = \frac{\square}{5}$

8. $\frac{3}{5} = \frac{\square}{10}$

Equivalent Fractions

First, divide each line according to the denominator shown. Then, use each fraction line to find the equivalent fractions.

$\dfrac{1}{2}$

$\dfrac{1}{3}$

$\dfrac{1}{4}$

$\dfrac{1}{6}$

$\dfrac{1}{8}$

$\dfrac{1}{12}$

1. $\dfrac{6}{12} = \dfrac{\square}{2}$ 2. $\dfrac{3}{\square} = \dfrac{1}{4}$

3. $\dfrac{2}{\square} = \dfrac{4}{12}$ 4. $\dfrac{\square}{4} = \dfrac{6}{8}$

5. $\dfrac{4}{\square} = \dfrac{1}{3}$ 6. $\dfrac{5}{6} = \dfrac{10}{\square}$

7. $\dfrac{2}{3} = \dfrac{8}{\square}$ 8. $\dfrac{1}{\square} = \dfrac{2}{12}$

Challenge:

Using what you've learnt about the equivalence between the fractions above, can you work out these equivalent fractions?

9. $\dfrac{1}{3} = \dfrac{\square}{9}$ 10. $\dfrac{7}{8} = \dfrac{\square}{16}$

11. $\dfrac{5}{12} = \dfrac{10}{\square}$ 12. $\dfrac{2}{3} = \dfrac{\square}{9}$

Equivalent Fractions

Work out these equivalent fractions:

1. $\dfrac{2}{3} = \dfrac{\square}{6}$

2. $\dfrac{4}{\square} = \dfrac{2}{4}$

3. $\dfrac{1}{5} = \dfrac{4}{\square}$

4. $\dfrac{1}{4} = \dfrac{\square}{12}$

5. $\dfrac{4}{\square} = \dfrac{8}{12}$

6. $\dfrac{2}{\square} = \dfrac{1}{6}$

In your own words, explain how to find an equivalent fraction.

_____

_____

_____

Now, work out these equivalent fractions:

7. $\dfrac{6}{\square} = \dfrac{2}{3}$

8. $\dfrac{\square}{16} = \dfrac{3}{8}$
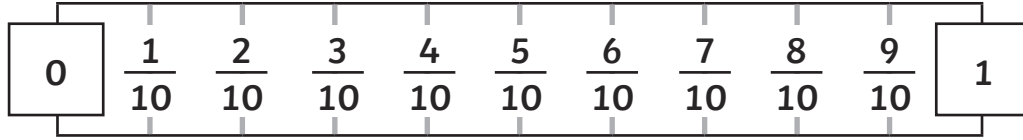
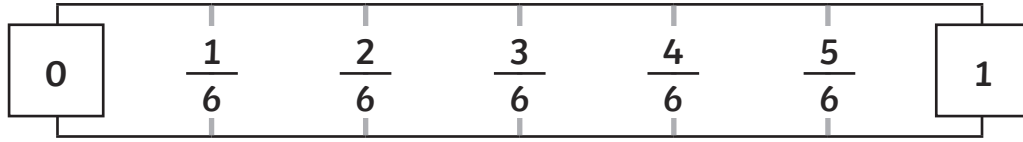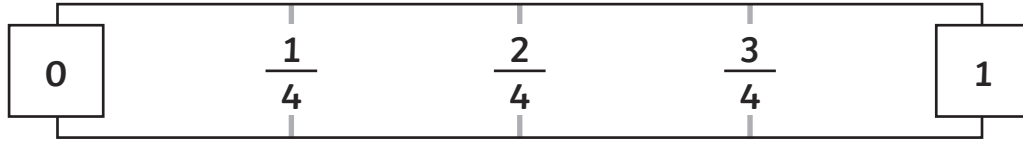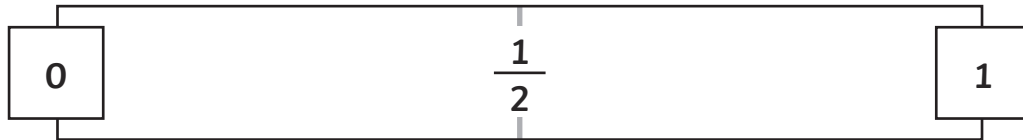9. $\dfrac{5}{6} = \dfrac{\square}{24}$

10. $\dfrac{\square}{8} = \dfrac{14}{56}$

11. $\dfrac{4}{7} = \dfrac{\square}{28}$

12. $\dfrac{9}{13} = \dfrac{45}{\square}$

Sam says that $\dfrac{2}{3}$ is equivalent to $\dfrac{3}{9}$. Is he correct? Explain your answer.

_____

_____

_____

Equivalent Fractions **Answers**

| 0 | $\frac{1}{2}$ | 1 |

| 0 | $\frac{1}{3}$ | $\frac{2}{3}$ | 1 |

| 0 | $\frac{1}{4}$ | $\frac{2}{4}$ | $\frac{3}{4}$ | 1 |

| 0 | $\frac{1}{5}$ | $\frac{2}{5}$ | $\frac{3}{5}$ | $\frac{4}{5}$ | 1 |

| 0 | $\frac{1}{6}$ | $\frac{2}{6}$ | $\frac{3}{6}$ | $\frac{4}{6}$ | $\frac{5}{6}$ | 1 |

| 0 | $\frac{1}{10}$ | $\frac{2}{10}$ | $\frac{3}{10}$ | $\frac{4}{10}$ | $\frac{5}{10}$ | $\frac{6}{10}$ | $\frac{7}{10}$ | $\frac{8}{10}$ | $\frac{9}{10}$ | 1 |

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

2. $\frac{2}{3} = \frac{\boxed{4}}{6}$

3. $\frac{1}{5} = \frac{\boxed{2}}{10}$

4. $\frac{1}{3} = \frac{\boxed{2}}{6}$
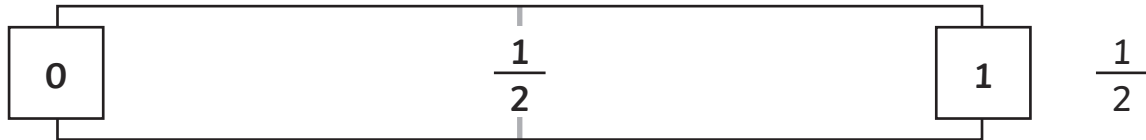
5. $\frac{1}{2} = \frac{\boxed{5}}{10}$

6. $\frac{4}{5} = \frac{\boxed{8}}{10}$

7. $\frac{4}{10} = \frac{\boxed{2}}{5}$

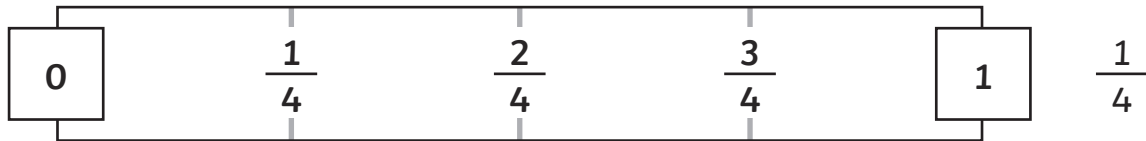8. $\frac{3}{5} = \frac{\boxed{6}}{10}$
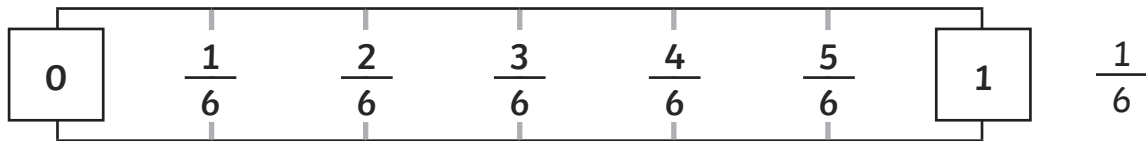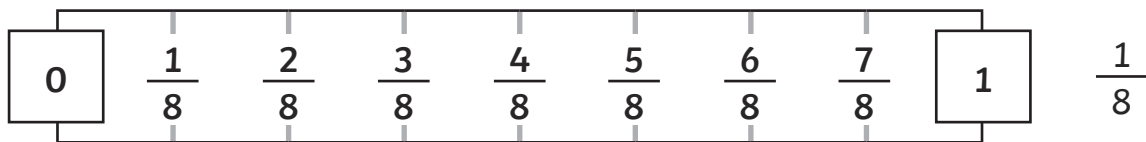
Equivalent Fractions **Answers**
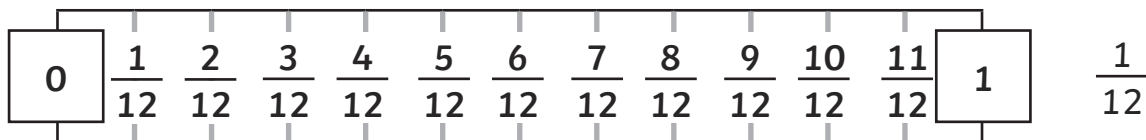
| 0 | $\frac{1}{2}$ | 1 | $\frac{1}{2}$ |

| 0 | $\frac{1}{3}$ | $\frac{2}{3}$ | 1 | $\frac{1}{3}$ |

| 0 | $\frac{1}{4}$ | $\frac{2}{4}$ | $\frac{3}{4}$ | 1 | $\frac{1}{4}$ |

| 0 | $\frac{1}{6}$ | $\frac{2}{6}$ | $\frac{3}{6}$ | $\frac{4}{6}$ | $\frac{5}{6}$ | 1 | $\frac{1}{6}$ |

| 0 | $\frac{1}{8}$ | $\frac{2}{8}$ | $\frac{3}{8}$ | $\frac{4}{8}$ | $\frac{5}{8}$ | $\frac{6}{8}$ | $\frac{7}{8}$ | 1 | $\frac{1}{8}$ |

| 0 | $\frac{1}{12}$ | $\frac{2}{12}$ | $\frac{3}{12}$ | $\frac{4}{12}$ | $\frac{5}{12}$ | $\frac{6}{12}$ | $\frac{7}{12}$ | $\frac{8}{12}$ | $\frac{9}{12}$ | $\frac{10}{12}$ | $\frac{11}{12}$ | 1 | $\frac{1}{12}$ |

1. $\frac{6}{12} = \frac{\boxed{1}}{2}$

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

3. $\frac{2}{\boxed{6}} = \frac{4}{12}$

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

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

6. $\frac{5}{6} = \frac{10}{\boxed{12}}$

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

8. $\frac{1}{\boxed{6}} = \frac{2}{12}$

Challenge:

Using what you've learnt about the equivalence between the fractions above, can you work out these equivalent fractions?

9. $\frac{1}{3} = \frac{\boxed{3}}{9}$

10. $\frac{7}{8} = \frac{\boxed{14}}{16}$

11. $\frac{5}{12} = \frac{10}{\boxed{24}}$

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

Equivalent Fractions **Answers**

Work out these equivalent fractions:

1. $\dfrac{2}{3} = \dfrac{\boxed{4}}{6}$

2. $\dfrac{4}{\boxed{8}} = \dfrac{2}{4}$

3. $\dfrac{1}{5} = \dfrac{4}{\boxed{20}}$

4. $\dfrac{1}{4} = \dfrac{\boxed{3}}{12}$

5. $\dfrac{4}{\boxed{6}} = \dfrac{8}{12}$

6. $\dfrac{2}{\boxed{12}} = \dfrac{1}{6}$

In your own words, explain how to find an equivalent fraction.

Pupil's own response.

Now, work out these equivalent fractions:

7. $\dfrac{6}{\boxed{9}} = \dfrac{2}{3}$

8. $\dfrac{\boxed{6}}{16} = \dfrac{3}{8}$

9. $\dfrac{5}{6} = \dfrac{\boxed{20}}{24}$

10. $\dfrac{\boxed{2}}{8} = \dfrac{14}{56}$

11. $\dfrac{4}{7} = \dfrac{\boxed{16}}{28}$

12. $\dfrac{9}{13} = \dfrac{45}{\boxed{65}}$

Sam says that $\dfrac{2}{3}$ is equivalent to $\dfrac{3}{9}$. Is he correct? Explain your answer.

He is incorrect. Accept any explanation that correctly explains why $\dfrac{2}{3}$ is not equivalent to $\dfrac{3}{9}$. For example, Sam is wrong because to make the denominators equal (9) 3 would need to be multiplied by 3. 2 multiplied by 3 is 6 so $\dfrac{2}{3}$ is equivalent to $\dfrac{6}{9}$.