



Adding &



Subtracting



Fractions

$$\begin{array}{r} 1 \\ \hline 2 \\ 3 \\ \hline 7 \\ \hline \end{array} +$$

We need a common denominator to add these fractions.

$$\begin{array}{r} \frac{1}{2} \\ + \frac{3}{7} \\ \hline \end{array}$$

We need a common denominator to add these fractions.

Count by 2's

2, 4, 6, 8, 10, 12, 14, 16, 18, 20

Count by 7's

7, 14, 21, 28, 35...

Count by 2's

2, 4, 6, 8, 10, 12, 14, 16, 18, 20

Count by 7's

7, 14, 21, 28, 35...

**The first number IN COMMON
that appears on both lists
becomes the common denominator**



x 7

7

=



Make equivalent



x 7



x 2

6

=



Add the numerators

+



x 2

$$7 + 6 = 13$$

13



$$\begin{array}{r} 3 \\ \hline 7 \\ + 1 \\ \hline 5 \end{array}$$

We need a common denominator to add these fractions.

Count by 7's

7, 14, 21, 28, 35, 42, 49, 56, 63

Count by 5's

5, 10, 15, 20, 25, 30, 35, 40, 45



x 5

15

=



x 5



x 7

7

=



+



x 7

Make equivalent

Add the numerators

$$15 + 7 = 22$$

22



4

7

+

3

8

We need a common denominator to add these fractions.

Count by 7's

7, 14, 21, 28, 35, 42, 49, 56, 63

Count by 8's

8, 16, 24, 32, 40, 48, 56, 64, 72

4	x 8	32
7	=	56
3	x 7	21
8	=	56
+		
4		
7		
3		
8		
53		
		56

Make equivalent

Add the numerators

$$32 + 21 = 53$$

$$\begin{array}{r} 3 \\ \hline 5 \\ 2 \\ \hline 3 \\ \hline \end{array} +$$

We need a common denominator to add these fractions.

Count by 3's

3, 6, 9, 12, 15, 18, 21, 24, 27

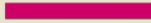
Count by 5's

5, 10, 15, 20, 25, 30, 35, 40, 45



x 3

9



=

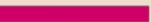


x 3



x 5

10



=



x 5



+

Add the numerators

$$9 + 10 = 19$$

19



$$\begin{array}{r} \boxed{5} \\ \hline \boxed{11} \\ + \boxed{2} \\ \hline \boxed{3} \end{array}$$

We need a common denominator to add these fractions.

Count by 3's

3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33

Count by 11's

11, 22, 33, 44, 55, 66, 77...



x 3

15

=



x 3

Make equivalent

+



x 11

22

=



x 11

Add the numerators

$$15 + 22 = 37$$

37



$$\begin{array}{r} 2 \\ \hline 3 \\ + \\ 1 \\ \hline 6 \end{array}$$

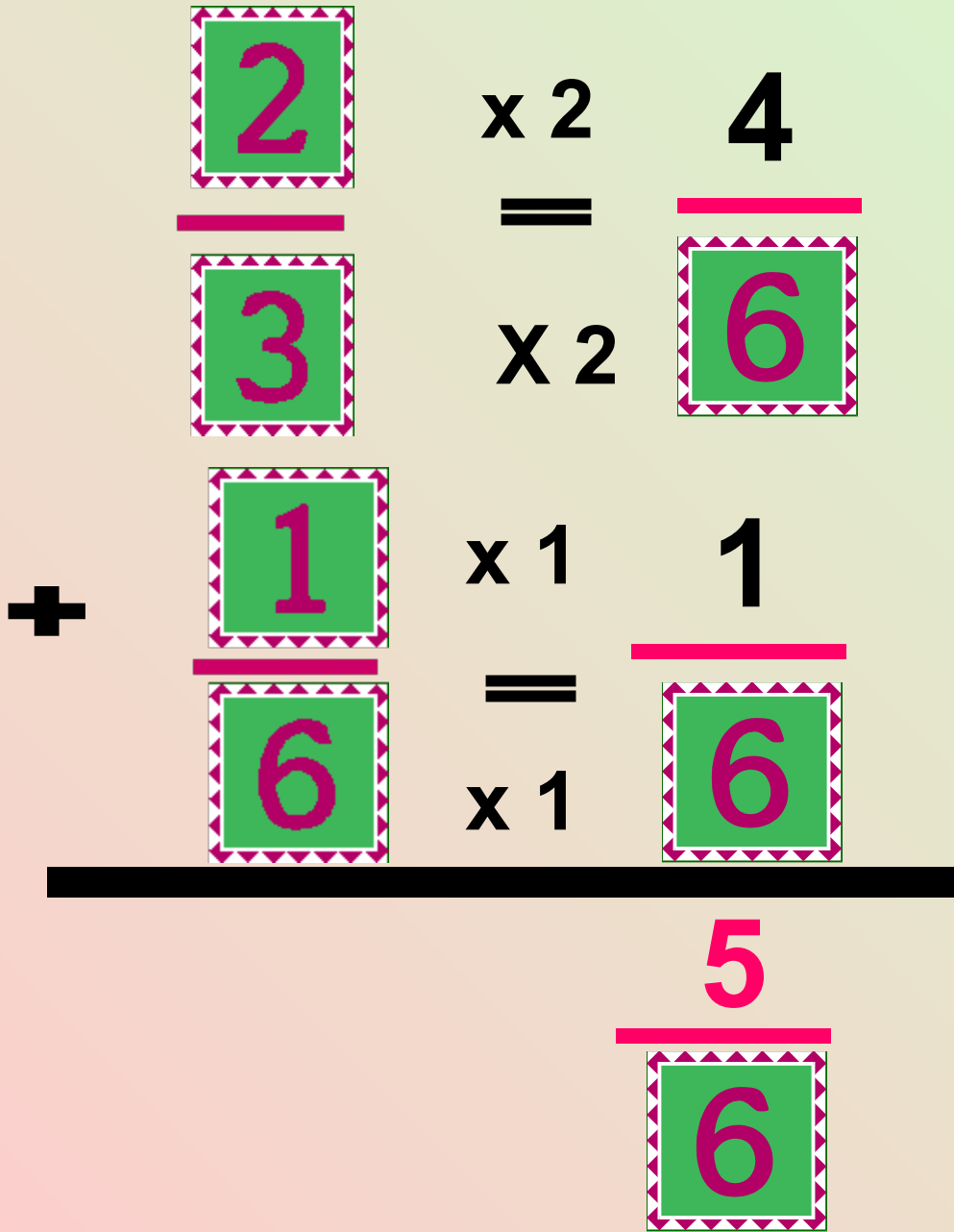
We need a common denominator to add these fractions.

Count by 3's

3, 6, 9, 12, 15, 18, 21, 24, 27

Count by 6's

6, 12, 18, 24, ...



Make equivalent

Add the numerators

$$4 + 1 = 5$$

$$\begin{array}{r} 3 \\ \hline 11 \\ + \\ \hline 1 \\ \hline 6 \\ \hline \end{array}$$

We need a common denominator to add these fractions.

Count by 11's

11, 22, 33, 44, 55, 66, 77...

6, 12, 18, 24, 30, 36, 42, 48, 54, 60, 66, 72



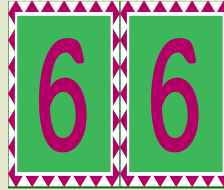
x 6

18

=



x 6



Make equivalent

+



x 11

11

=



x 11



Add the numerators.

$$18 + 11 = 29$$

29



$$\begin{array}{r} 4 \\ \hline 5 \\ + \\ 7 \\ \hline 9 \\ \hline \end{array}$$

We need a common denominator to add these fractions.

$$\begin{array}{r} 4 \\ \hline 5 \\ + \\ 7 \\ \hline 9 \\ \hline \end{array}$$

We need a common denominator to add these fractions.

Count by 5's

5, 10, 15, 20, 25, 30, 35, 40, 45

Count by 9's

9, 18, 27, 36, 45, 54, 63, 72, 81








Count by 5's

5, 10, 15, 20, 25, 30, 35, 40, 45

Count by 9's

9, 18, 27, 36, 45, 54, 63, 72, 81

**The first number IN COMMON
that appears on both lists
becomes the common denominator**

+		x 9	36
	<hr style="border: 1px solid black;"/>	=	<hr style="border: 1px solid black;"/>
		x 9	
		x 5	35
	<hr style="border: 1px solid black;"/>	=	<hr style="border: 1px solid black;"/>
		x 5	
<hr style="border: 2px solid black;"/>			
		71	
		<hr style="border: 1px solid black;"/>	
			

Make equivalent

Add the numerators.

$$36 + 35 = 71$$

$$\begin{array}{r} 5 \\ \hline 12 \\ + 3 \\ \hline 8 \\ \hline \end{array}$$

We need a common denominator to add these fractions.

Count by 12's

12, 24, 36, 48, 60, 72, 84, 96

Count by 8's

8, 16, 24, 32, 40, 48, 56, 64, 72, 79, 80, 88, 96



$$5 \times 2 = 10$$

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

+



$$3 \times 3 = 9$$

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

Make equivalent

Add the numerators.

$$10 + 9 = 19$$



3

11

1

5

We need a common denominator to subtract a fraction from another.

Count by 5's

5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55

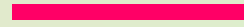
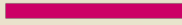
Count by 11's

11, 22, 33, 44, 55, 66, 77...



x 5

15



x 5



x 11

11



x 11



Make equivalent

Subtract.

$$15 - 11 = 4$$

4



1

2

3

10

We need a common denominator to subtract one fraction from another.

Count by 2's

2, 4, 6, 8, 10, 12, 14, 16, 18, 20 ...

Count by 10's

10, 20, 30...



$$\begin{array}{r}
 \times 5 \quad 5 \\
 = \\
 \times 5 \quad \boxed{10}
 \end{array}$$

$$\begin{array}{r}
 \times 1 \quad 3 \\
 = \\
 \times 1 \quad \boxed{10}
 \end{array}$$

Make equivalent

Subtract.

$$5 - 3 = 2$$



Try These

A $\frac{1}{3} + \frac{8}{27}$

B $\frac{1}{4} + \frac{5}{6}$

C $\frac{7}{10} + \frac{1}{4}$

D $\frac{1}{3} + \frac{7}{9}$

E $\frac{5}{7} + \frac{3}{4}$

F $\frac{2}{3} + \frac{4}{7}$

Answers On Next Slide

- Each click on the next slide reveals an answer.
- **Check your papers.**
- If you discover an incorrect answer, be able to explain your mistake.

Try These

A

$$\frac{17}{27}$$

D

$$\frac{10}{9}$$

B

$$\frac{13}{12}$$

E

$$\frac{41}{28}$$

C

$$\frac{19}{20}$$

F

$$\frac{26}{21}$$