

# Strategies for Adding Whole Numbers

There are many ways to add whole numbers. Here are some ways to add 9727 and 4895.

$\begin{array}{r} 9727 \\ + 4895 \\ \hline \end{array}$
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1. Add in parts.

$9000 + 4000 = 13\ 000$	}	$14\ 500$	}	$14\ 622$
$700 + 800 = 1\ 500$	}			
$20 + 90 = 110$	}	$122$		
$7 + 5 = 12$	}			

2. 4895 is 5 less than 4900.

If you add 5 to 4895 and subtract 5 from 9727, the answer will not change.

$$9727 - 5 = 9722$$

$$4895 + 5 = 4900$$

To add  $9722 + 4900$ :

$9000 + 4000 = 13\ 000$	}	$14\ 600 + 22 = 14\ 622$
$700 + 900 = 1\ 600$	}	

3.

Add the ones. Trade 10 ones for 1 ten. → Add the tens. Trade 10 tens for 1 hundred. → Add the hundreds. Trade 10 hundreds for 1 thousand. → Add the thousands.

$$\begin{array}{r} \phantom{0}1 \\ 9727 \\ + 4895 \\ \hline \phantom{0}2 \end{array}$$

$$\begin{array}{r} \phantom{00}11 \\ 9727 \\ + 4895 \\ \hline \phantom{00}22 \end{array}$$

$$\begin{array}{r} \phantom{000}111 \\ 9727 \\ + 4895 \\ \hline \phantom{000}622 \end{array}$$

$$\begin{array}{r} \phantom{0000}1111 \\ 9727 \\ + 4895 \\ \hline \phantom{0000}14622 \end{array}$$

# Addition: Whole Numbers (1)

1.

$$\begin{array}{r} 68 \\ + 27 \\ \hline \end{array}$$

$$\begin{array}{r} 95 \\ + 88 \\ \hline \end{array}$$

$$\begin{array}{r} 57 \\ + 43 \\ \hline \end{array}$$

$$\begin{array}{r} 90 \\ + 36 \\ \hline \end{array}$$

2.

$$\begin{array}{r} 58 \\ + 99 \\ \hline \end{array}$$

$$\begin{array}{r} 76 \\ + 24 \\ \hline \end{array}$$

$$\begin{array}{r} 23 \\ + 82 \\ \hline \end{array}$$

$$\begin{array}{r} 47 \\ + 25 \\ \hline \end{array}$$

3.

$$\begin{array}{r} 765 \\ + 809 \\ \hline \end{array}$$

$$\begin{array}{r} 257 \\ + 389 \\ \hline \end{array}$$

$$\begin{array}{r} 672 \\ + 738 \\ \hline \end{array}$$

$$\begin{array}{r} 599 \\ + 699 \\ \hline \end{array}$$

4.

$$\begin{array}{r} 941 \\ + 685 \\ \hline \end{array}$$

$$\begin{array}{r} 900 \\ + 850 \\ \hline \end{array}$$

$$\begin{array}{r} 387 \\ + 668 \\ \hline \end{array}$$

$$\begin{array}{r} 476 \\ + 674 \\ \hline \end{array}$$

5.

$$\begin{array}{r} 6351 \\ + 8472 \\ \hline \end{array}$$

$$\begin{array}{r} 9645 \\ + 3987 \\ \hline \end{array}$$

$$\begin{array}{r} 2085 \\ + 5841 \\ \hline \end{array}$$

$$\begin{array}{r} 6979 \\ + 5859 \\ \hline \end{array}$$

6.

$$\begin{array}{r} 7638 \\ + 9738 \\ \hline \end{array}$$

$$\begin{array}{r} 8252 \\ + 4978 \\ \hline \end{array}$$

$$\begin{array}{r} 6211 \\ + 7233 \\ \hline \end{array}$$

$$\begin{array}{r} 9893 \\ + 462 \\ \hline \end{array}$$

# Strategies for Subtracting Whole Numbers

There are many ways to subtract whole numbers. Here are some ways to subtract 1889 from 3497.

$$\begin{array}{r} 3497 \\ - 1889 \\ \hline \end{array}$$

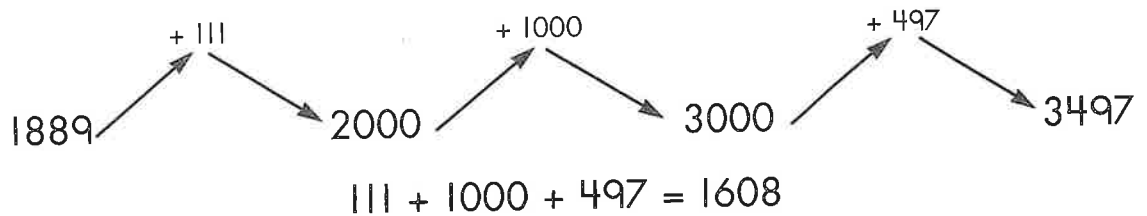
1. If you add the same amount to both numbers, the difference will remain the same.

$$\begin{aligned} 3497 + 3 &= 3500 \\ 1889 + 3 &= 1892 \\ \text{Now subtract } 3500 - 1892. \\ 3500 - 1800 &= 1700 \\ 1700 - 92 &= 1608 \end{aligned}$$

2. Round 1889 to 2000.

$$\begin{aligned} 3497 - 2000 &= 1497 \\ \text{Difference between rounded} \\ \text{number and actual number:} \\ 2000 - 1889 &= 111 \\ 1497 + 111 &= 1608 \end{aligned}$$

3. Add in steps to get from 1889 to 3497.



You added 1608 in all, so  $3497 - 1889 = 1608$ .

4. More ones are needed. → Trade 1 ten for 10 ones. → Subtract the ones. → Subtract the tens. → More hundreds are needed. Trade 1 thousand for 10 hundreds. Subtract the hundreds. → Subtract the thousands.

$$\begin{array}{r} 3497 \\ - 1889 \\ \hline \end{array}$$

$$\begin{array}{r} \phantom{3}8\phantom{0}17 \\ 34\cancel{9}7 \\ - 1889 \\ \hline 8 \end{array}$$

$$\begin{array}{r} \phantom{3}8\phantom{0}17 \\ 34\cancel{9}7 \\ - 1889 \\ \hline 08 \end{array}$$

$$\begin{array}{r} 214817 \\ \cancel{3}4\cancel{9}7 \\ - 1889 \\ \hline 608 \end{array}$$

$$\begin{array}{r} 214817 \\ \cancel{3}4\cancel{9}7 \\ - 1889 \\ \hline 1608 \end{array}$$

# Subtraction: Whole Numbers (1)

1.

$$\begin{array}{r} 89 \\ - 26 \\ \hline \end{array}$$

$$\begin{array}{r} 53 \\ - 49 \\ \hline \end{array}$$

$$\begin{array}{r} 71 \\ - 39 \\ \hline \end{array}$$

$$\begin{array}{r} 50 \\ - 38 \\ \hline \end{array}$$

2.

$$\begin{array}{r} 507 \\ - 268 \\ \hline \end{array}$$

$$\begin{array}{r} 391 \\ - 149 \\ \hline \end{array}$$

$$\begin{array}{r} 600 \\ - 252 \\ \hline \end{array}$$

$$\begin{array}{r} 768 \\ - 29 \\ \hline \end{array}$$

3.

$$\begin{array}{r} 6841 \\ - 586 \\ \hline \end{array}$$

$$\begin{array}{r} 3907 \\ - 278 \\ \hline \end{array}$$

$$\begin{array}{r} 2000 \\ - 899 \\ \hline \end{array}$$

$$\begin{array}{r} 3082 \\ - 463 \\ \hline \end{array}$$

4.

$$\begin{array}{r} 7362 \\ - 4809 \\ \hline \end{array}$$

$$\begin{array}{r} 9621 \\ - 4376 \\ \hline \end{array}$$

$$\begin{array}{r} 8593 \\ - 1869 \\ \hline \end{array}$$

$$\begin{array}{r} 7006 \\ - 2534 \\ \hline \end{array}$$

5.

$$\begin{array}{r} 8209 \\ - 2647 \\ \hline \end{array}$$

$$\begin{array}{r} 8004 \\ - 7958 \\ \hline \end{array}$$

$$\begin{array}{r} 6732 \\ - 4811 \\ \hline \end{array}$$

$$\begin{array}{r} 9494 \\ - 2599 \\ \hline \end{array}$$

6.

$$\begin{array}{r} 7382 \\ - 4593 \\ \hline \end{array}$$

$$\begin{array}{r} 1506 \\ - 1062 \\ \hline \end{array}$$

$$\begin{array}{r} 3700 \\ - 1290 \\ \hline \end{array}$$

$$\begin{array}{r} 8615 \\ - 4923 \\ \hline \end{array}$$

# Strategies for Multiplying Whole Numbers

There are many ways to multiply whole numbers. Here are some ways to multiply 768 by 12.

$$\begin{array}{r} 768 \\ \times 12 \\ \hline \end{array}$$

1.

Multiply the parts of 768 by 10.

$$\begin{array}{l} 10 \times 700 = 7000 \\ 10 \times 60 = 600 \\ 10 \times 8 = \underline{80} \\ 7680 \end{array}$$

Multiply the parts of 768 by 2.

$$\begin{array}{l} 2 \times 700 = 1400 \\ 2 \times 60 = 120 \\ 2 \times 8 = \underline{16} \\ 1536 \end{array}$$

$$7680 + 1536 = 8000 + 1100 + 110 + 6 = 9216$$

2.

Multiply the parts of 768 by 12.

$$\begin{array}{l} 12 \times 700 = 8400 \\ 12 \times 60 = 720 \\ 12 \times 8 = \underline{96} \\ 9216 \end{array}$$

3.

Multiply 768 by 2.

$$\begin{array}{r} 11 \\ 768 \\ \times 12 \\ \hline 1536 \end{array}$$

Multiply 768 by 10.

$$\begin{array}{r} 11 \\ 768 \\ \times 12 \\ \hline 1536 \\ \hline 7680 \end{array}$$

Add.

$$\begin{array}{r} 768 \\ \times 12 \\ \hline 1536 \\ \hline 7680 \\ \hline 9216 \end{array}$$

# Multiplication: Whole Numbers (1)

1.

$$\begin{array}{r} 82 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 96 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 75 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 64 \\ \times 6 \\ \hline \end{array}$$

2.

$$\begin{array}{r} 90 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 37 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 84 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 73 \\ \times 3 \\ \hline \end{array}$$

3.

$$\begin{array}{r} 77 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 54 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 49 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 70 \\ \times 7 \\ \hline \end{array}$$

4.

$$\begin{array}{r} 206 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 538 \\ \times 5 \\ \hline \end{array}$$

$$\begin{array}{r} 790 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 817 \\ \times 4 \\ \hline \end{array}$$

5.

$$\begin{array}{r} 632 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 518 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 694 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 372 \\ \times 6 \\ \hline \end{array}$$

6.

$$\begin{array}{r} 945 \\ \times 7 \\ \hline \end{array}$$

$$\begin{array}{r} 737 \\ \times 2 \\ \hline \end{array}$$

$$\begin{array}{r} 864 \\ \times 8 \\ \hline \end{array}$$

$$\begin{array}{r} 943 \\ \times 7 \\ \hline \end{array}$$

# Strategies for Dividing Whole Numbers

There are many ways to divide whole numbers.  
Here are some ways to divide 4863 by 15.

$$15 \overline{)4863}$$

1. Rename 4863 as a sum of numbers easily divided by 15.

$$4500 + 300 + 63$$

$$4500 \div 15 = 300$$

$$300 \div 15 = 20$$

$$63 \div 15 = 4 \text{ R. } 3$$

$$320 + 4 = 324$$

$$4863 \div 15 = 324 \text{ R}3$$

2. Multiply 15 by numbers you know will work, to get as close to 4863 as you can.

$$\begin{array}{r}
 4 \\
 20 \\
 300 \\
 \hline
 15 \overline{)4863} \\
 \underline{4500} \\
 363 \\
 \underline{300} \\
 63 \\
 \underline{60} \\
 3
 \end{array}$$

$$4863 \div 15 = 324 \text{ R}3$$

3. Divide the hundreds. → Bring down the tens. → Divide the tens. → Multiply and subtract. → Bring down the ones. → Divide the ones. → Multiply and subtract. → Write the remainder.

Th	H	T	O
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$$\begin{array}{r}
 3 \\
 15 \overline{)4863} \\
 \underline{45} \\
 3
 \end{array}$$

Th	H	T	O
----	---	---	---

$$\begin{array}{r}
 3 \\
 15 \overline{)4863} \\
 \underline{45} \downarrow \\
 36
 \end{array}$$

Th	H	T	O
----	---	---	---

$$\begin{array}{r}
 32 \\
 15 \overline{)4863} \\
 \underline{45} \\
 36 \\
 \underline{30} \\
 6
 \end{array}$$

Th	H	T	O
----	---	---	---

$$\begin{array}{r}
 32 \\
 15 \overline{)4863} \\
 \underline{45} \downarrow \\
 36 \\
 \underline{30} \downarrow \\
 63
 \end{array}$$

Th	H	T	O
----	---	---	---

$$\begin{array}{r}
 324 \\
 15 \overline{)4863} \\
 \underline{45} \\
 36 \\
 \underline{30} \\
 63 \\
 \underline{60} \\
 3
 \end{array}$$

Th	H	T	O
----	---	---	---

$$\begin{array}{r}
 324 \text{ R}3 \\
 15 \overline{)4863} \\
 \underline{45} \\
 36 \\
 \underline{30} \\
 63 \\
 \underline{60} \\
 3
 \end{array}$$

# Division: Whole Numbers (1)

1.  $89 \div 9 =$  \_\_\_\_\_       $46 \div 4 =$  \_\_\_\_\_       $94 \div 7 =$  \_\_\_\_\_

2.  $71 \div 4 =$  \_\_\_\_\_       $75 \div 5 =$  \_\_\_\_\_       $37 \div 8 =$  \_\_\_\_\_

3.  $66 \div 6 =$  \_\_\_\_\_       $48 \div 4 =$  \_\_\_\_\_       $84 \div 2 =$  \_\_\_\_\_

4.  $27 \div 6 =$  \_\_\_\_\_       $39 \div 5 =$  \_\_\_\_\_       $97 \div 8 =$  \_\_\_\_\_

5.  $84 \div 3 =$  \_\_\_\_\_       $57 \div 7 =$  \_\_\_\_\_       $60 \div 4 =$  \_\_\_\_\_

6.  $526 \div 4 =$  \_\_\_\_\_       $843 \div 6 =$  \_\_\_\_\_       $705 \div 5 =$  \_\_\_\_\_

7.  $837 \div 3 =$  \_\_\_\_\_       $624 \div 4 =$  \_\_\_\_\_       $571 \div 2 =$  \_\_\_\_\_

8.  $219 \div 8 =$  \_\_\_\_\_       $435 \div 7 =$  \_\_\_\_\_       $528 \div 9 =$  \_\_\_\_\_

9.  $860 \div 9 =$  \_\_\_\_\_       $423 \div 6 =$  \_\_\_\_\_       $852 \div 8 =$  \_\_\_\_\_

10.  $702 \div 4 =$  \_\_\_\_\_       $555 \div 4 =$  \_\_\_\_\_       $361 \div 6 =$  \_\_\_\_\_