

Numbers, Operations and Relationships

Calculations with Whole Numbers - Memo

1. Add the following numbers together by following these steps:

Step 1: Estimate your answer by rounding off to the nearest thousand.

Step 2: Do your calculation

Step 3: Check your answer using your calculator.

a) $189\,630 + 93\,808$

Step 1: $190\,000 + 94\,000$
 $= 284\,000$

Step 2:

		1	1	1			
		1	8	9	6	3	0
+			9	3	8	0	8
		2	8	3	4	3	8

Step 3: $283\,438$

b) $848\,484 + 109\,098$

Step 1: $848\,000 + 109\,000$
 $= 957\,000$

Step 2:

			1		1	1	
		8	4	8	4	8	4
+		1	0	9	0	9	8
		9	5	7	5	8	2

Step 3: $957\,582$

c) $238\,524 + 333\,710$

Step 1: $239\,000 + 334\,000$
 $= 573\,000$

Step 2:

			1	1			
		2	3	8	5	2	4
+		3	3	3	7	1	0
		5	7	2	2	3	4

Step 3: $572\,234$

d) $244\,620 + 322\,472$

Step 1: $245\,000 + 322\,000$
 $= 567\,000$

Step 2:

				1			
		2	4	4	6	2	0
+		3	2	2	4	7	2
		5	6	7	0	9	2

Step 3: $567\,092$

e) $42\ 380 + 498\ 312$

Step 1: $42\ 000 + 498\ 000$
 $= 540\ 000$

Step 2:

		1	1				
			4	2	3	8	0
+		4	9	8	3	1	2
		4	4	0	6	9	2

Step 3: $540\ 692$

f) $474\ 012 + 56\ 196$

Step 1: $474\ 000 + 56\ 000$
 $= 530\ 000$

Step 2:

		1	1		1		
		4	7	4	0	1	2
+			5	6	1	9	6
		5	3	0	2	0	8

Step 3: $530\ 208$

g) $60\ 876 + 47\ 788$

Step 1: $61\ 000 + 48\ 000$
 $= 109\ 000$

Step 2:

		1		1	1	1	
			6	0	8	7	6
+			4	7	7	8	8
		1	0	8	6	6	4

Step 3: $108\ 664$

h) $788\ 676 + 71\ 545$

Step 1: $789\ 000 + 72\ 000$
 $= 861\ 000$

Step 2:

		1	1	1	1	1	
		7	8	8	6	7	6
+			7	1	5	4	5
		8	6	0	2	2	1

Step 3: $860\ 221$

i) $113\ 828 + 87\ 936$

Step 1: $114\ 000 + 88\ 000$
 $= 202\ 000$

Step 2:

		1	1	1		1	
		1	1	3	8	2	8
+			8	7	9	3	6
		2	0	1	7	6	4

Step 3: $201\ 764$

j) $192\ 045 + 98\ 905$

Step 1: $192\ 000 + 99\ 000$
 $= 291\ 000$

Step 2:

		1	1			1	
		1	9	2	0	4	5
+			9	8	9	0	5
		2	9	0	9	5	0

Step 3: $290\ 950$

k) $15\ 150 + 18\ 250$

Step 1: $15\ 000 + 18\ 000$
 $= 33\ 000$

l) $165\ 545 + 62\ 046$

Step 1: $166\ 000 + 62\ 000$
 $= 228\ 000$

Step 2:

			1		1		
			1	5	1	5	0
+			1	8	2	5	0
			3	3	4	0	0

Step 3: 33 400

Step 2:

		1				1	
		1	6	5	5	4	5
+			6	2	0	4	6
		2	2	7	5	9	1

Step 3: 227 591

2. Subtract the following numbers by following these steps:

Step 1: Estimate your answer by rounding off to the nearest thousand.

Step 2: Do your calculation

Step 3: Check your answer using your calculator.

a) $871\,290 - 197\,064$

Step 1: $871\,000 - 197\,000$
 $= 674\,000$

Step 2:

		7	16	11		8	10
		8	7	1	2	9	0
-		1	9	7	0	6	4
		6	7	4	2	2	6

Step 3: 674 226

b) $972\,187 - 311\,850$

Step 1: $972\,000 - 312\,000$
 $= 660\,000$

Step 2:

				1	11		
		9	7	2	1	8	7
-		3	1	1	8	5	0
		6	6	0	3	3	7

Step 3: 660 337

c) $391\,560 - 212\,680$

Step 1: $392\,000 - 213\,000$
 $= 179\,000$

Step 2:

			8	10	14	16	
		3	9	1	5	6	0
-		2	1	2	6	8	0
		1	7	8	8	8	0

Step 3: 178 880

d) $123\,152 - 45\,719$

Step 1: $123\,000 - 46\,000$
 $= 77\,000$

Step 2:

		0	11	12	11	4	12
		1	2	3	1	5	2
-			4	5	7	1	9
			7	7	4	3	3

Step 3: 77 433

e) $934\ 605 - 432\ 615$

Step 1: $935\ 000 - 433\ 000$
 $= 502\ 000$

Step 2:

				3	15	10	
		9	3	4	6	0	5
-		4	3	2	6	1	5
		5	0	1	9	9	0

Step 3: $501\ 990$

f) $898\ 012 - 515\ 665$

Step 1: $898\ 000 - 516\ 000$
 $= 382\ 000$

Step 2:

				7	9	10	12
		8	9	8	0	1	2
-		5	1	5	6	6	5
		3	8	2	3	4	7

Step 3: $382\ 347$

g) $106\ 490 - 49\ 712$

Step 1: $106\ 000 - 50\ 000$
 $= 56\ 000$

Step 2:

		0	9	15	14	8	10
		1	0	6	4	9	0
-			4	9	7	1	2
			5	6	7	7	8

Step 3: $56\ 778$

h) $609\ 285 - 485\ 224$

Step 1: $609\ 000 - 485\ 000$
 $= 124\ 000$

Step 2:

		5	10				
		6	0	9	2	8	5
-		4	8	5	2	2	4
		1	2	4	0	6	1

Step 3: $124\ 061$

i) $872\ 298 - 325\ 166$

Step 1: $872\ 000 - 325\ 000$
 $= 547\ 000$

Step 2:

			6	12			
		8	7	2	2	9	8
-		3	2	5	1	6	6
		5	4	7	1	3	2

Step 3: $547\ 132$

j) $204\ 768 - 90\ 376$

Step 1: $205\ 000 - 90\ 000$
 $= 115\ 000$

Step 2:

		1	10		6	16	
		2	0	4	7	6	8
-			9	0	3	7	6
		1	1	4	3	9	2

Step 3: $114\ 392$

k) $143\ 763 - 75\ 312$

Step 1: $144\ 000 - 75\ 000$
 $= 69\ 000$

l) $362\ 358 - 262\ 728$

Step 1: $362\ 000 - 263\ 000$
 $= 99\ 000$

Step 2:

		0	13	13			
		1	4	3	7	6	3
-			7	5	3	1	2
			6	8	4	5	1

Step 3: 68 451

Step 2:

		2	15	11	13		
		3	6	2	3	5	8
-		2	6	2	7	2	8
		.	9	9	6	3	0

Step 3: 99 630

3. Do the following multiplication sums by following these steps:

Step 1: Estimate your answer by rounding off to the nearest 10.

Step 2: Do your calculation

Step 3: Check your answer using your calculator.

a) 2185×69

Step 1: 2190×70

$= 153\ 300$

Step 2:

				1	5	3	
					7	4	
				2	1	8	5
x			1			6	9
			1	9	6	6	5
+		1	3	1	1	0	0
		1	5	0	7	6	5

Step 3: 150 765

b) 6562×52

Step 1: 6560×50

$= 328\ 000$

Step 2:

				2	3	1	
				1	1		
				6	5	6	2
x			1			5	2
			1	3	1	2	4
+		3	2	8	1	0	0
		3	4	1	2	2	4

Step 3: 341 224

c) 5435×17

Step 1: 5440×20

$= 108\ 800$

Step 2:

				3	2	3	
				5	4	3	5
x			1			1	7
			3	8	0	4	5
+			5	4	3	5	0
			9	2	3	9	5

Step 3: 92 395

d) 2569×25

Step 1: 2570×30

$= 77\ 100$

Step 2:

				1	1	1	
				2	3	4	
				2	5	6	9
x			1	1	2	5	
			1	2	8	4	5
+			5	1	3	8	0
			6	4	2	2	5

Step 3: 64 225

e) 5072×34

Step 1: 5070×30
 $= 152\ 100$

Step 2:

					2		
					2		
				5	0	7	2
x					1	3	4
			2	0	2	8	8
+		1	5	2	1	6	0
		1	7	2	4	4	8

Step 3: $172\ 448$

f) 1160×14

Step 1: 1160×10
 $= 11\ 600$

Step 2:

						2	
					1	1	6
x					1		4
				4	6	4	0
+			1	1	6	0	0
			1	6	2	4	0

Step 3: $16\ 240$

g) 3816×51

Step 1: 3820×50
 $= 191\ 000$

Step 2:

				4		3	
				3	8	1	6
x				1		5	1
				3	8	1	6
+		1	9	0	8	0	0
		1	9	4	6	1	6

Step 3: $194\ 616$

h) 1751×23

Step 1: 1750×20
 $= 35\ 000$

Step 2:

				1	1		
				2	1		
x				1	7	5	1
				5	2	5	3
+			3	5	0	2	0
			4	0	2	7	3

Step 3: $40\ 273$

i) 1401×22

Step 1: 1400×20
 $= 28\ 000$

Step 2:

				1	4	0	1
x				1		2	2
				2	8	0	2
+			2	8	0	2	0
			3	0	8	2	2

Step 3: $30\ 822$

j) 5891×75

Step 1: 5890×80
 $= 471\ 200$

Step 2:

				6	6		
				4	4		
x				5	8	9	1
				1	1	7	5
			2	9	4	5	5
+			4	1	2	3	7
			4	4	1	8	2

Step 3: $441\ 825$

k) 1233×18

Step 1: 1230×20
 $= 24\ 600$

Step 2:

				1	2	2	
				1	2	3	3
x			1	1		1	8
				9	8	6	4
+			1	2	3	3	0
			2	2	1	9	4

Step 3: $22\ 194$

l) 3349×62

Step 1: 3350×60
 $= 201\ 000$

Step 2:

				2	2	5	
						1	
				3	3	4	9
x				1	1	6	2
				6	6	9	8
		2	0	0	9	4	0
		2	0	7	6	3	8

Step 3: $207\ 638$

4. Do the following division sums by following these steps:

Step 1: Estimate your answer by rounding off to the nearest 10.

Step 2: Do your calculation by using long or short division and showing the remainder.

Step 3: Check your answer using your calculator.

a) $5279 \div 8$

Step 1: $5280 \div 10$
 $= 528$

Step 2:

			.	6	5	9	r7
	8		5	2	7	9	
		-	4	8			
				4	7		
			-	4	0		
					7	9	
				-	7	2	
						7	

Step 3: $659\ r\ 7$

b) $3074 \div 67$

Step 1: $3070 \div 70$
 ≈ 44

Step 2:

			.	.	4	5	r59
	67		3	0	7	4	
		-	2	6	8		
				3	9	4	
				3	3	5	
					5	9	

Step 3: $45\ r\ 59$

c) $2999 \div 33$

Step 1: $3000 \div 30$
 $= 100$

d) $4321 \div 25$

Step 1: $4320 \div 30$
 ≈ 144

Step 2:

			.	.	9	0	r29
	33		2	9	9	9	
		-	2	9	7		
					2	9	

Step 3: 90 r 29

Step 2:

			.	1	7	2	r21
	25		4	3	2	1	
		-	2	5			
			1	8	2		
		-	1	7	5		
					7	1	
					-	5	0
					2	1	

Step 3: 172 r 21

e) $4354 \div 61$

Step 1: $4350 \div 60$
 $= 72 \text{ r } 30$

Step 2:

			.	.	7	1	r23
	61		4	3	5	4	
		-	4	2	7		
					8	4	
				-	6	1	
					2	3	

Step 3: 71 r 23

f) $5260 \div 52$

Step 1: $5260 \div 50$
 $\approx 105 \text{ r } 10$

Step 2:

			.	1	0	1	r8
	52		5	2	6	0	
		-	5	2			
			.	.	6		
				-	0		
					6	0	
					-	5	2
						8	

Step 3: 101 r 8

g) $3264 \div 11$

Step 1: $3260 \div 10$
 $= 326$

Step 2:

			.	2	9	6	r8
	11		3	2	6	4	
		-	2	2			
			1	0	6		
		-		9	9		
					7	4	
				-	6	6	
						8	

Step 3: 296 r 8

h) $6423 \div 9$

Step 1: $6420 \div 10$
 $= 642$

Step 2:

			.	7	1	3	r6
	9		6	4	2	3	
		-	6	3			
				1	2		
				-	9		
					3	3	
					-	2	7
						6	

Step 3: 713 r 6

i) $1257 \div 14$

Step 1: $1260 \div 10$

= 126

Step 2:

			.	.	8	9	r11
	14		1	2	5	7	
		-	1	1	2		
				1	3	7	
			-	1	2	6	
					1	1	

Step 3: $89 \text{ r } 11$

j) $7290 \div 89$

Step 1: $7290 \div 90$

= 81

Step 2:

			.	.	8	1	r81
	89		7	2	9	0	
		-	7	1	2		
				1	7	0	
			-		8	9	
					8	1	

Step 3: $81 \text{ r } 81$

k) $2589 \div 44$

Step 1: $2590 \div 40$

= 64

Step 2:

			.	.	5	8	r37
	44		2	5	8	9	
		-	2	2	0		
				3	8	9	
			-	3	5	2	
					3	7	

Step 3: $58 \text{ r } 37$

l) $2954 \div 39$

Step 1: $2950 \div 40$

= 73

Step 2:

			.	.	7	5	r29
	39		2	9	5	4	
		-	2	7	3		
				2	2	4	
			-	1	9	5	
					2	9	

Step 3: $75 \text{ r } 29$