

Smart Subtract™

Puzzle Instructions

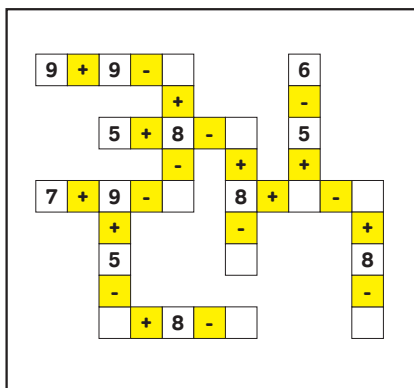


Use **ONLY** wet-erase markers. **Any other marker may permanently damage the sheets.**

Smart Subtract Puzzles combine the fun and ingenuity of puzzles with the repetition and practice kids need to master their basic subtraction facts. Each puzzle is composed of two-step problems in a crossword-like format.

Skill Development

This unique and “puzzling” approach teaches kids to:



1. Subtract single-digit numbers quickly and efficiently
2. Master sums of 10 - a foundational skill for both addition and subtraction
3. Develop their “mental math” skills by working with sums and differences in their head
4. Think algebraically by solving for missing addends and subtrahends

3 Levels of Difficulty

- **Green** puzzles are the easiest and focus on two foundational skills: subtracting single-digit numbers and making sums of 10.
- **Blue** puzzles build on the green puzzles and challenge kids to subtract larger numbers before making sums of 10.
- **Purple** puzzles are the most difficult and add a challenging twist. Students must think algebraically and “work backwards” to find missing subtrahends - the number that is subtracted to get the difference.



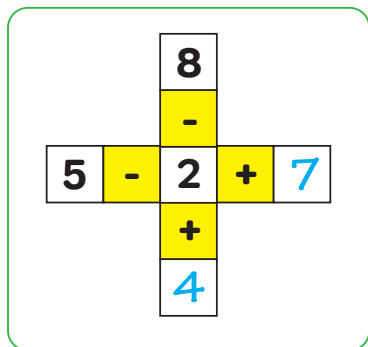
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Puzzle Examples



Use **ONLY** wet-erase markers. **Any other marker may permanently damage the sheets.**

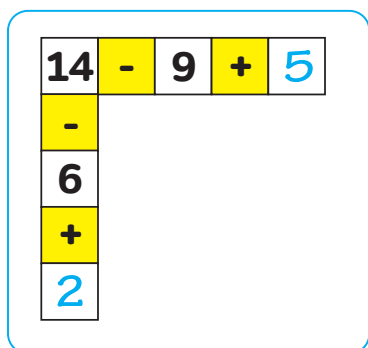
Green Example: Make a 10



Across Subtract the first two numbers: $5 - 2 = 3$.
Next, find the missing addend: $3 + ? = 10$.
Since $3 + 7 = 10$, the answer is 7.

Down Subtract the first two numbers: $8 - 2 = 6$.
Next, find the missing addend: $6 + ? = 10$.
Since $6 + 4 = 10$, the answer is 4.

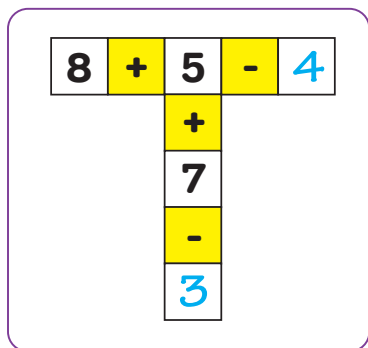
Blue Example: Make a 10



Across Subtract the first two numbers: $14 - 9 = 5$.
Next, find the missing addend: $5 + ? = 10$.
Since $5 + 5 = 10$, the answer is 5.

Down Subtract the first two numbers: $14 - 6 = 8$.
Next, find the missing addend: $8 + ? = 10$.
Since $8 + 2 = 10$, the answer is 2.

Purple Example: Make a 9



Across Add the first two numbers: $8 + 5 = 13$.
Next, find the missing subtrahend: $13 - ? = 9$.
Since $13 - 4 = 9$, the answer is 4.

Down Add the first two numbers: $5 + 7 = 12$.
Next, find the missing subtrahend: $12 - ? = 9$.
Since $12 - 3 = 9$, the answer is 3.



Smart Subtract™

Sum-Difference Puzzles



10s

Write a single-digit number in each empty box so every expression across or down equals **10**. Calculate from left to right and top to bottom.

6	-	3	+	a
-				-
5				1
+				+
c				d
		9		
		-		
		1		
		+		
7	-	f	+	g

		9		
		-		
4	-	2	+	b
		+		
		e		
8				
-				
4				
+				
h	-	5	+	i

Flip side: a=8 b=4 c=5 d=6 e=7 f=3 g=9 h=7 i=1 j=2



Smart Subtract™

Sum-Difference Puzzles



10s

Write a single-digit number in each empty box so every expression across or down equals **10**. Calculate from left to right and top to bottom.

9	-	7	+	a
		-		
8	-	3	+	c
		+		
9		d		6
-				-
8	-	1	+	f
+				+
g				h

8	-	2	+	b
				-
				1
				+
				e
				9
				-
				0
				+
9	-	i	+	j

Flip side: a=7 b=8 c=9 d=4 e=3 f=2 g=5 h=6 i=9



Smart Subtract™

Sum-Difference Puzzles



10s

Write a single-digit number in each empty box so every expression across or down equals **10**. Calculate from left to right and top to bottom.

		8		
		-		
9	-	3	+	b
		+		
		c		
8				
-				
4				
+				
g	-	3	+	h
k				

9	-	8	+	a
-				-
1				2
+				+
d				e
		7		
		-		
5	-	3	+	f
		+		
7	-	i	+	j

Flip side: a=7 b=6 c=8 d=9 e=5 f=2 g=3 h=8 i=4



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Sum-Difference Puzzles



10s

Write a single-digit number in each empty box so every expression across or down equals **10**. Calculate from left to right and top to bottom.

7				8
-				-
5	-	2	+	a
+				+
c				d
		9		
		-		
		1		
		+		
9	-	f	+	g

		9		
		-		
8	-	4	+	b
		+		
		e		
7				6
-				-
5				0
+				+
h	-	2	+	i

Flip side: a=9 b=4 c=5 d=2 e=3 f=8 g=6 h=7 i=6 j=9



Smart Subtract™

Sum-Difference Puzzles



10s

Write a single-digit number in each empty box so every expression across or down equals **10**. Calculate from left to right and top to bottom.

9	-	1	+	a
		-		
		0		
		+		
		d		
9				6
-				-
8	-	1	+	f
+				+
g				h

9	-	5	+	b
		-		
8	-	3	+	c
		+		
		e		
8				
-				
2				
+				
i	-	2	+	j

Flip side: a=4 b=3 c=6 d=9 e=5 f=2 g=8 h=7 i=8



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Sum-Difference Puzzles



10s

Write a single-digit number in each empty box so every expression across or down equals **10**. Calculate from left to right and top to bottom.

		7		
		-		
9	-	3	+	a
		+		
		c		
9				6
-				-
1				4
+				+
f	-	0	+	g

9				8
-				-
8	-	1	+	b
+				+
d				e
		5		
		-		
		2		
		+		
9	-	h	+	i

Flip side: a=2 b=6 c=5 d=9 e=8 f=3 g=9 h=7 i=4 j=8



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Sum-Difference Puzzles



10s

Write a single-digit number in each empty box so every expression across or down equals **10**. Calculate from left to right and top to bottom.

		12	-	7	+	a				18
		-							-	
15	-	8	+	b					9	
		+							+	
14	-	c	+	d				11		e
-								-		
8						12	-	9	+	f
+							+			
g						16	-	h	+	i

Flip side: a=4 b=7 c=5 d=4 e=6 f=5 g=1 h=3 i=2



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Sum-Difference Puzzles



10s

Write a single-digit number in each empty box so every expression across or down equals **10**. Calculate from left to right and top to bottom.

		14	-	8	+	a		
		-						
12	-	9	+	b			13	
-		+					-	
8		c		15	-	9	+	d
+				-			+	
e		13	-	8	+	f		g
				+				
		11	-	h	+	i		

Flip side: a=5 b=3 c=6 d=2 e=1 f=7 g=4 h=8 i=2



Sum-Difference Puzzles



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10s

Write a single-digit number in each empty box so every expression across or down equals **10**. Calculate from left to right and top to bottom.

		18		15	-	9	+	a
		-		-				
11	-	9	+	b		12		
-		+		+		-		
7		c		d		8		14
+						+		-
e				11	-	f	+	g
								+
17	-	9	+	h				i

Flip side: a=1 b=4 c=2 d=7 e=3 f=4 g=1 h=6 i=3



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Sum-Difference Puzzles

10

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10s

Write a single-digit number in each empty box so every expression across or down equals **10**. Calculate from left to right and top to bottom.

		17	-	8	+	a			
		-							
15	-	9	+	b			14		16
-		+				-		-	
8		c		11	-	8	+	d	
+				-		+		+	
e				7		f		g	
				+					
		13	-	h	+	i			

Flip side: a=4 b=8 c=1 d=3 e=6 f=6 g=5 h=2 i=1



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Sum-Difference Puzzles



10s

Write a single-digit number in each empty box so every expression across or down equals **10**. Calculate from left to right and top to bottom.

		13	-	7	+	a				15
		-							-	
11	-	9	+	b					8	
		+							+	
14	-	c	+	d			16		e	
-							-			
9						18	-	9	+	f
+							+			
g						12	-	h	+	i

Flip side: a=2 b=3 c=1 d=6 e=4 f=6 g=3 h=5 i=1



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Sum-Difference Puzzles

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10s

Write a single-digit number in each empty box so every expression across or down equals **10**. Calculate from left to right and top to bottom.

		17	-	9	+	a	
		-					
15	-	8	+	b			13
-		+					-
9		c		12	-	8	+
+				-			+
e		11	-	7	+	f	g
				+			
		14	-	h	+	i	

Flip side: a=4 b=8 c=6 d=2 e=3 f=1 g=5 h=3 i=1



10s

Write a single-digit number in each empty box so every expression across or down equals **10**. Calculate from left to right and top to bottom.

		15		14	-	9	+	a
		-		-				
13	-	9	+	b		11		
-		+		+		-		
6		c		d		8		13
+						+		-
e				12	-	f	+	g
								+
18	-	9	+	h				i

Flip side: a=5 b=2 c=6 d=5 e=3 f=2 g=4 h=4 i=1

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Sum-Difference Puzzles

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10s

Write a single-digit number in each empty box so every expression across or down equals **10**. Calculate from left to right and top to bottom.

		12	-	7	+	a			
		-							
16	-	8	+	b			17		11
-		+					-		-
9		c			14	-	9	+	d
+					-		+		+
e					8		f		g
					+				
		13	-	h	+	i			

Flip side: a=5 b=6 c=4 d=2 e=3 f=7 g=5 h=1 i=2



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Sum-Difference Puzzles



10s

Write a single-digit number in each empty box so every expression across or down equals **10**. Calculate from left to right and top to bottom.

8	+	9	-	a						9	+	9	-	b
+										+				
7					8	+	8	-	c					
-					+					-				
d	+	8	-	e						7	+	f	-	g
		+		-						+			+	
		6			h					9			9	
		-								-			-	
8	+	i	-	j						k				l

Flip side: a=8 b=3 c=5 d=7 e=4 f=6 g=5 h=6 i=3 j=1 k=2



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9s

Write a single-digit number in each empty box so every expression across or down equals 9. Calculate from left to right and top to bottom.

8	+	9	-	a
+				
8		9		
-		+		
d	+	6	-	e
		-		+
		h		8
				-
7	+	i	-	j

4	+	8	-	b
		+		
7	+	7	-	c
		-		
8	+	f	-	g
+				+
2				6
-				-
				k

Flip side: a=7 b=8 c=6 d=5 e=3 f=5 g=2 h=1 i=4 j=2 k=6 l=1



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8s

Write a single-digit number in each empty box so every expression across or down equals **8**. Calculate from left to right and top to bottom.

7	+	9	-	a		6	+	5	-	b	
				+				+			
		6	+	7	-	c		7			
				-		+		-			
9	+	6	-	d		9	+	e	-	f	
+						-				+	
5		6	+	8	-	g				5	
-										-	
h	+	6	-	i						j	

Flip side: a=9 b=4 c=7 d=6 e=5 f=8 g=7 h=3 i=3 j=4



Sum-Difference Puzzles

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7s

8	+	8	-	a						
+			+							
6			4	+	7	-	b			
-			-		+					
c		5	d		8	+	4	-	e	
		+			-		+			
		9	+	6	-	f		6		
		-					-			
3	+	g	-	h		8	+	i	-	j



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6s

Write a single-digit number in each empty box so every expression across or down equals 6. Calculate from left to right and top to bottom.

		8				9	+	6	-	a
		+								+
		7		3	+	8	-	b		2
		-				+				-
5	+	c	-	d		5	+	6	-	e
				+		-		+		
		9	+	4	-	f		7		
				-				-		
3	+	9	-	g		3	+	h	-	i

Flip side: a=6 b=6 c=5 d=9 e=7 f=8 g=7 h=9 i=5 j=8 k=8 l=7



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5s

Write a single-digit number in each empty box so every expression across or down equals 5. Calculate from left to right and top to bottom.

4	+	7	-	a
---	---	---	---	---

+

7

-

9	+	2	-	b
---	---	---	---	---

+

4	+	6	-	c
---	---	---	---	---

-

3	+	d	-	e
---	---	---	---	---

+

7

-

i

+

6

-

j

f	+	4	-	g
---	---	---	---	---

+

6	+	8	-	h
---	---	---	---	---

-

4	+	k	-	l
---	---	---	---	---

Flip side: a=9 b=5 c=9 d=8 e=5 f=7 g=6 h=7 i=4

