

Aurion January 7th, 2023

NS3-14 Subtraction without Regrouping

1. Subtract by crossing out tens and ones.

a) $48 - 16 = 32$

Cross out 1 ten and 6 ones since $16 = 1 \text{ ten} + 6 \text{ ones}$

b) $36 - 21 = 15$

$$\begin{array}{r} 36 \\ - 21 \\ \hline 15 \end{array}$$

c) $25 - 13 = 12$

$$\begin{array}{r} 25 \\ - 13 \\ \hline 12 \end{array}$$

d) $47 - 24 = 23$

$$\begin{array}{r} 47 \\ - 24 \\ \hline 23 \end{array}$$

2. Write the number of tens and ones in each number. Then subtract.

a) $49 = 4 \text{ tens} + 9 \text{ ones}$
 $- 26 = 2 \text{ tens} + 6 \text{ ones}$
 $= 2 \text{ tens} + 3 \text{ ones}$
 $= 23$

b) $59 = 5 \text{ tens} + 9 \text{ ones}$
 $- 23 = 2 \text{ tens} + 3 \text{ ones}$
 $= 3 \text{ tens} + 6 \text{ ones}$
 $= 36$

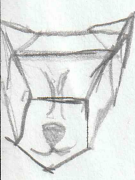
c) $67 = 6 \text{ tens} + 7 \text{ ones}$
 $- 53 = 5 \text{ tens} + 3 \text{ ones}$
 $= 1 \text{ ten} + 4 \text{ ones}$
 $= 14$

d) $86 = 8 \text{ tens} + 6 \text{ ones}$
 $- 54 = 5 \text{ tens} + 4 \text{ ones}$
 $= 3 \text{ tens} + 2 \text{ ones}$
 $= 32$

e) $97 = 9 \text{ tens} + 7 \text{ ones}$
 $- 56 = 5 \text{ tens} + 6 \text{ ones}$
 $= 4 \text{ tens} + 1 \text{ one}$
 $= 41$

f) $81 = 8 \text{ tens} + 1 \text{ one}$
 $- 61 = 6 \text{ tens} + 1 \text{ one}$
 $= 2 \text{ tens} + 0 \text{ ones}$
 $= 20$

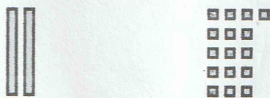
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Auriana January 7th 2023

NS3-15 Subtraction with Regrouping—Tens

1. Regroup 1 tens block as 10 ones blocks.

	Before	After
a) 36	 3 tens + 6 ones	 2 tens + 16 ones
b) 27	 2 tens + 7 ones	 1 ten + 17 ones
c) 42	 4 tens + 2 ones	 3 tens + 12 ones

2. Regroup 1 ten as 10 ones.

a) $\begin{array}{r} 7 \ 12 \\ - 5 \ 3 \\ \hline 2 \ 9 \end{array}$	b) $\begin{array}{r} 5 \ 11 \\ - 4 \ 8 \\ \hline 1 \ 9 \end{array}$	c) $\begin{array}{r} 3 \ 10 \\ - 1 \ 9 \\ \hline 2 \ 1 \end{array}$	d) $\begin{array}{r} 4 \ 11 \\ - 4 \ 7 \\ \hline 0 \ 4 \end{array}$	e) $\begin{array}{r} 2 \ 15 \\ - 1 \ 8 \\ \hline 1 \ 7 \end{array}$
f) $\begin{array}{r} 4 \ 10 \\ - 3 \ 6 \\ \hline 1 \ 4 \end{array}$	g) $\begin{array}{r} 8 \ 15 \\ - 2 \ 8 \\ \hline 6 \ 7 \end{array}$	h) $\begin{array}{r} 1 \ 18 \\ - 1 \ 9 \\ \hline 0 \ 9 \end{array}$	i) $\begin{array}{r} 2 \ 13 \\ - 2 \ 5 \\ \hline 0 \ 8 \end{array}$	j) $\begin{array}{r} 6 \ 14 \\ - 4 \ 6 \\ \hline 2 \ 8 \end{array}$
k) $\begin{array}{r} 3 \ 12 \\ - 2 \ 7 \\ \hline 1 \ 5 \end{array}$	l) $\begin{array}{r} 7 \ 13 \\ - 3 \ 8 \\ \hline 4 \ 5 \end{array}$	m) $\begin{array}{r} 5 \ 11 \\ - 5 \ 7 \\ \hline 0 \ 4 \end{array}$	n) $\begin{array}{r} 8 \ 10 \\ - 8 \ 9 \\ \hline 0 \ 1 \end{array}$	o) $\begin{array}{r} 4 \ 18 \\ - 3 \ 9 \\ \hline 1 \ 9 \end{array}$

Auriah Von Woolfgard January 8th, 2023

NS4-16 Subtraction

To subtract $48 - 32$, Braden makes a model of 48.

Then he crosses out 3 tens and 2 ones because $32 = 3 \text{ tens} + 2 \text{ ones}$.



48



$48 - 32$

=



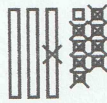
16

1. Subtract by crossing out tens and ones blocks. Draw your final answer in the right-hand box.

a)

$39 - 18$

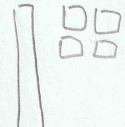
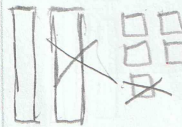
$= 21$



b)

$25 - 11$

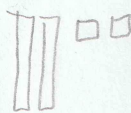
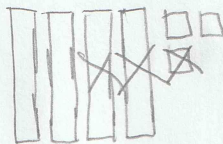
$= 14$



c)

$43 - 21$

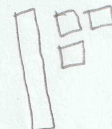
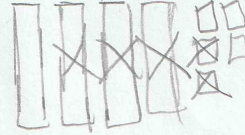
$= 22$



d)

$45 - 32$

$= 13$



2. Write how many tens and ones in each number. Then subtract the tens and ones to find the final answer.

a) $45 = \underline{4} \text{ tens} + \underline{5} \text{ ones}$

$- 32 = \underline{3} \text{ tens} + \underline{2} \text{ ones}$

$= \underline{1} \text{ ten} + \underline{3} \text{ ones}$

$= \underline{13}$

b) $57 = \underline{5} \text{ tens} + \underline{7} \text{ ones}$

$- 34 = \underline{3} \text{ tens} + \underline{4} \text{ ones}$

$= \underline{2} \text{ tens} + \underline{3} \text{ ones}$

$= \underline{23}$

c) $84 = \underline{8} \text{ tens} + \underline{4} \text{ ones}$

$- 63 = \underline{6} \text{ tens} + \underline{3} \text{ ones}$

$= \underline{2} \text{ tens} + \underline{1} \text{ one}$

$= \underline{21}$

d) $89 = \underline{8} \text{ tens} + \underline{9} \text{ ones}$

$- 56 = \underline{5} \text{ tens} + \underline{6} \text{ ones}$

$= \underline{3} \text{ tens} + \underline{3} \text{ ones}$

$= \underline{33}$

e) $77 = \underline{7} \text{ tens} + \underline{7} \text{ ones}$

$- 44 = \underline{4} \text{ tens} + \underline{4} \text{ ones}$

$= \underline{3} \text{ tens} + \underline{3} \text{ ones}$

$= \underline{33}$

f) $67 = \underline{6} \text{ tens} + \underline{7} \text{ ones}$

$- 45 = \underline{4} \text{ tens} + \underline{5} \text{ ones}$

$= \underline{2} \text{ tens} + \underline{2} \text{ ones}$

$= \underline{22}$

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January 8th, 2023

Property of JUMP Math ID#5

NS4-20 Estimating Sums and Differences

Mathematicians use the sign $\approx$ to mean **approximately equal to**.

1. Estimate by rounding to the nearest **ten**.

a) $52 \rightarrow 50$
 $+ 34 \rightarrow + 30$
 $\underline{\quad 80 \quad}$

b) $19 \rightarrow 20$
 $+ 65 \rightarrow + 70$
 $\underline{\quad 70 \quad}$

c) $47 \rightarrow 50$
 $+ 11 \rightarrow + 10$
 $\underline{\quad 50 \quad}$

d) $95 \rightarrow 100$
 $- 62 \rightarrow - 60$
 $\underline{\quad 120 \quad}$

e) $32 + 11$
 $\approx 30 + 10$
 $= 40$

f) $74 + 32$
 $\approx 70 + 30$
 $= 100$

g) $37 + 25$
 $\approx 40 + 20$
 $= 60$

h) $84 + 28$
 $\approx 80 + 30$
 $= 110$

i) $25 + 37 + 59$
 $\approx 20 + 40 + 60$
 $= 120$

j) $28 - 12$
 $\approx 30 - 10$
 $= 20$

k) $36 + 63 + 72$
 $\approx 40 + 60 + 70$
 $= 170$

l) $85 - 17$
 $\approx 80 - 20$
 $= 60$

2. Estimate by rounding to the nearest **hundred**.

a) $170 \rightarrow 200$
 $+ 350 \rightarrow + 400$
 $\underline{\quad 600 \quad}$

b) $190 \rightarrow 200$
 $+ 650 \rightarrow + 700$
 $\underline{\quad 900 \quad}$

c) $470 \rightarrow 500$
 $- 110 \rightarrow - 100$
 $\underline{\quad 600 \quad}$

d) $950 \rightarrow 1,000$
 $- 620 \rightarrow - 600$
 $\underline{\quad 1,000 \quad}$

e) $540 + 210$
 $\approx 500 + 200$
 $= 700$

f) $550 + 330$
 $\approx 600 + 300$
 $= 900$

g) $210 + 770$
 $\approx 200 + 800$
 $= 1,000$

h) $750 + 220$
 $\approx 800 + 200$
 $= 1,000$

i) $380 + 420 + 190$
 $\approx 400 + 400 + 200$
 $= 1,000$

j) $871 - 543$
 $\approx 900 - 500$
 $= 400$

k) $483 + 283$
 $\approx 500 + 300$
 $= 800$

l) $689 - 214$
 $\approx 700 - 200$
 $= 500$

3. Estimate by rounding to the nearest **thousand**.

a) $1275 \rightarrow 1,000$
 $+ 3940 \rightarrow + 4,000$
 $\underline{\quad 5,000 \quad}$

b) $4729 \rightarrow 5,000$
 $+ 3,132 \rightarrow + 3,000$
 $\underline{\quad 8,000 \quad}$

c) $2570 \rightarrow 3,000$
 $+ 634 \rightarrow + 600$
 $\underline{\quad 3,600 \quad}$

d) $9172 \rightarrow 9,000$
 $- 4529 \rightarrow - 4,000$
 $\underline{\quad 5,000 \quad}$

4. Round each number to the nearest **hundred**. Then find the sum or difference.

a) $3272 + 1235 \approx 3,300 + 1,200 = 4,500$

b) $3581 - 1826 \approx 3,600 - 1,800 = 1,800$

c) $4821 - 3670 \approx 4,800 - 3,700 = 1,100$

- Aurian Von Woolfgard January 8th, 2023

Property of JUMP Math ID#5 NS4-17 Subtraction with Regrouping

Jax subtracts $46 - 18$ using base ten blocks.

Step 1:

Jax represents 46 with base ten blocks.

Tens	Ones
4	6
	

Here is how Jax uses numerals to show his work:

$$\begin{array}{r} 46 \\ - 18 \\ \hline \end{array}$$

Step 2:

8 (the ones digit of 18) is greater than 6 (the ones digit of 46) so Jax regroup 1 tens block as 10 ones blocks.

Tens	Ones
3	16
	

Here is how Jax shows the regrouping:

$$\begin{array}{r} 3 \ 16 \\ \cancel{4} \ \cancel{6} \\ - 1 \ 8 \\ \hline \end{array}$$

Step 3:

Jax subtracts 18 (he takes away 1 tens block and 8 ones blocks).

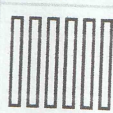
Tens	Ones
2	8
	

And now Jax can subtract 16 - 8 ones and 3 - 1 tens:

$$\begin{array}{r} 3 \ 16 \\ \cancel{4} \ \cancel{6} \\ - 1 \ 8 \\ \hline 2 \ 8 \end{array}$$

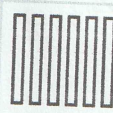
- Regroup 1 tens block as 10 ones. Then change the subtraction statement.

a) $63 - 26$

Tens	Ones	Tens	Ones
6	3	5	13
			

$$\begin{array}{r} 6 \ 3 \\ - 2 \ 6 \\ \hline \end{array} \rightarrow \begin{array}{r} 5 \ 13 \\ \cancel{6} \ \cancel{3} \\ - 2 \ 6 \\ \hline 3 \ 7 \end{array}$$

b) $64 - 39$

Tens	Ones	Tens	Ones
6	4	5	14
			

$$\begin{array}{r} 6 \ 4 \\ - 3 \ 9 \\ \hline \end{array} \rightarrow \begin{array}{r} 5 \ 14 \\ \cancel{6} \ \cancel{4} \\ - 3 \ 9 \\ \hline 2 \ 5 \end{array}$$

c) $42 - 19$

Tens	Ones	Tens	Ones
4	2	3	12
			

$$\begin{array}{r} 4 \ 2 \\ - 1 \ 9 \\ \hline \end{array} \rightarrow \begin{array}{r} 3 \ 12 \\ \cancel{4} \ \cancel{2} \\ - 1 \ 9 \\ \hline \end{array}$$

d) $35 - 27$

Tens	Ones	Tens	Ones
3	5	2	15
			

$$\begin{array}{r} 3 \ 5 \\ - 2 \ 7 \\ \hline \end{array} \rightarrow \begin{array}{r} 2 \ 15 \\ \cancel{3} \ \cancel{5} \\ - 2 \ 7 \\ \hline \end{array}$$

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Property of JUMP Math ID#2

5. Write "regroup" or "OK." Then subtract, regrouping if needed.

a)

	2	15
	3	5
-	1	6
	1	9

regroup

b)

	6	8
-	2	5
	4	3

OK

c)

	2	12
	3	2
-	2	6
	0	6

regroup

d)

	4	8
-	2	7
	2	1

OK

6. Subtract. Regroup if needed.

a)

	3	12
	4	2
-	2	7
	1	5

b)

	5	2
-	3	1
	2	1

c)

	5	16
	6	6
-	2	9
	3	7

d)

	8	1
-	5	0
	3	1

e)

	3	14
	4	4
-	3	7
	0	7

f)

	8	17
	9	7
-	3	9
	5	8

g)

	4	4
-	2	4
	2	0

h)

	5	6
-	1	5
	4	1

i)

	9	2
-	8	1
	1	1

j)

	8	7
-	3	7
	5	0

k)

	4	10
	5	0
-	1	7
	3	3

l)

	8	12
	9	2
-	2	6
	6	6

7. Do you need to regroup the top number in this question? Explain.

62

- 47

Yes, because you can't take 7 away from 2.

Number Sense 3-15

3. Regroup 1 ten as 10 ones. Then subtract. Start in the ones place.

a)

	7	12
	8	2
-	5	3
	2	9

b)

	4	12
	5	2
-	3	7
	1	5

c)

	4	17
	5	7
-	2	9
	2	8

d)

	7	11
	8	1
-	5	7
	2	4

e)

	2	12
	3	2
-	2	6
	0	6

f)

	7	17
	8	7
-	3	8
	4	9

g)

	3	14
	4	4
-	2	7
	1	7

h)

	5	16
	6	6
-	2	8
	3	8

4. Circle the greater digit in the ones place. Regroup if you need to, and write "regroup." Otherwise, write "OK."

a)

	2	15
	3	5
-	1	6

regroup

b)

	2	3
	4	8
-	2	5
	0	2

OK

c)

	2	12
	3	2
-	2	6
	0	6

Regroup

d)

	3	14
	5	8
-	2	7
	1	6

OK

e)

	1	12
	5	6
-	4	4
	1	2

OK

f)

	8	12
	9	2
-	1	8
	7	4

Regroup

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Property of JUMP Math ID#2



To subtract from 100, you need to regroup from the hundreds before you can regroup from the tens. Example:

Step 1:

	1	0	0
-		4	8

Step 2:

	0	10	
	1	0	0
-		4	8

Step 3:

		9	
	0	10	10
	1	0	0
-		4	8
			2

Step 4:

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

9. Subtract by regrouping.

a)

		9	
	0	10	10
	1	0	0
-		4	7
	0	5	3

b)

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

c)

		9	
	0	10	10
	1	0	0
-		6	5
	0	3	5

d)

		9	
	0	10	10
	1	0	0
-		1	9
	0	8	1

10. Now subtract from 99 without regrouping.

a)

	9	9
-	4	7
	5	2

b)

	9	9
-	5	2
	4	7

c)

	9	9
-	6	5
	3	4

d)

	9	9
-	1	9
	8	0

To subtract from 100, first subtract from 99. Then add 1 to your answer.

	9	9	add 1		1	0	0
	4	6			4	6	
	5	3	add 1		5	4	

11. Subtract from 99. Use the answer to subtract from 100.

a)

	9	9
-	4	7
	5	2

b)

	9	9
-	3	2
	6	7

c)

	9	9
-	5	6
	4	3

d)

	9	9
-	2	7
	7	2

100 - 47 = 53 100 - 32 = 68 100 - 56 = 44 100 - 27 = 73

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Property of JUMP Math ID#2

3. Subtract. Regroup 1 hundred as 10 tens, or 1 ten as 10 ones.

a)

		4	17
	4	5	7
-	2	3	9
	2	1	8

b)

	2	16	1
	3	6	6
-	2	9	5
	1	7	1

c)

			16
	4	6	6
-	1	3	9
	3	3	7

d)

		12	
	8	2	5
-	2	7	4
	6	5	1

e)

	2	15	
	3	5	4
-	1	9	0
	1		4

f)

	1	18	
	2	8	4
-	1	9	2
	0	9	2

g)

		6	16
	6	9	6
-	3	8	8
	3	0	8

h)

	3	11	
	4	1	7
-	2	8	2
	1	3	5

i)

	4	16	
	5	6	7
-	2	9	3
	2	0	4

j)

		4	11
	4	5	1
-	3	2	7
	1	2	4

k)

	5	14	
	6	4	8
-	3	5	1
	2	9	7

l)

		6	18
	2	7	8
-	1	6	9
	1	0	9

To subtract $642 - 279$, you need to regroup twice.

Step 1:

	3	12	
	6	4	2
-	2	7	9

Step 2:

	3	12	
	6	4	2
-	2	7	9
			3

Step 3:

		13	
	5	3	12
	6	4	2
-	2	7	9
			3

Step 4:

		13	
	5	3	12
	6	4	2
-	2	7	9
		6	3

Step 5:

		13	
	5	3	12
	6	4	2
-	2	7	9
	3	6	3

4. Subtract. You will need to regroup twice.

a)

		14	
	3	4	17
	4	5	7
-	2	6	9
	1	8	8

b)

		15	
	3	5	17
	4	6	7
-	1	9	8
	2	6	9

c)

		11	
	2	1	11
	3	2	1
-	1	6	7
	1	5	4

d)

		12	
	8	2	16
	9	3	6
-	2	7	8
	6	5	8

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Property of JUMP Math ID#2

5. Subtract. You will need to regroup twice.

a)

		11	
	2	1	17
	3	2	7
-	1	6	9
	1	5	8

b)

		17	
	4	1	17
	5	8	7
-	1	9	8
	3	8	7

c)

		10	
	7	8	11
	8	1	1
-	2	7	5
	5	3	6

d)

		11	
	6	1	15
	7	2	5
-	2	7	8
	4	6	7

e)

		14	
	1	1	12
	2	5	2
-	1	9	9
	0	5	3

f)

		16	
	3	1	15
	4	7	5
-	2	9	6
	1	7	9

g)

		11	
	7	1	15
	8	2	5
-	3	3	6
	4	8	9

h)

		13	
	3	1	14
	4	4	4
-	2	8	8
	1	5	6

6. Subtract. Regroup when needed.

a)

		2	17
	4	3	7
-	1	0	9
	3	2	8

b)

		3	18
	4	8	7
-	1	9	2
	2	9	5

c)

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

d)

	7	2	5	
-	2	1	3	
	5	1	2	

e)

		15	
	2	5	13
	3	6	3
-	1	9	9
	1	6	4

f)

		11	
	3	1	12
	4	2	2
-	2	9	6
	1	2	6

g)

	8	2	5	
-	3	1	3	
	5	1	2	

h)

	3	14		
	4	4	4	
-	2	8	1	
	1	6	3	

7. Sam has 346 dollars. He gives 175 dollars to a charity. How much money does he have left? Show your work.

	3	4	6
	3	1	7
-	1	7	5
	2	7	1

8. Clara has 562 stickers in her collection. She gives 384 stickers to her sister. How many stickers does Clara have left?

She would have 178 stickers

		5	6	2
	5	6	2	
	3	8	4	
-	3	8	4	
	2	7	8	

= 178

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January 8th, 20

Property of JUMP Math ID#5

2. Subtract with regrouping.

a)
$$\begin{array}{r} 313 \\ - 27 \\ \hline 16 \end{array}$$

b)
$$\begin{array}{r} 416 \\ - 18 \\ \hline 38 \end{array}$$

c)
$$\begin{array}{r} 514 \\ - 39 \\ \hline 25 \end{array}$$

d)
$$\begin{array}{r} 610 \\ - 28 \\ \hline 42 \end{array}$$

e)
$$\begin{array}{r} 415 \\ - 37 \\ \hline 18 \end{array}$$

f)
$$\begin{array}{r} 710 \\ - 57 \\ \hline 23 \end{array}$$

g)
$$\begin{array}{r} 218 \\ - 19 \\ \hline 19 \end{array}$$

h)
$$\begin{array}{r} 112 \\ - 6 \\ \hline 16 \end{array}$$

i)
$$\begin{array}{r} 314 \\ - 9 \\ \hline 35 \end{array}$$

j)
$$\begin{array}{r} 816 \\ - 75 \\ \hline 15 \end{array}$$

3. If you need to regroup, write "regroup" in the blank. If you don't need to regroup, write "OK." Then find the answer.

a)
$$\begin{array}{r} 414 \\ - 19 \\ \hline 35 \end{array}$$
 regroup
4 is less than 9

b)
$$\begin{array}{r} 77 \\ - 56 \\ \hline 21 \end{array}$$
 OK

c)
$$\begin{array}{r} 85 \\ - 53 \\ \hline 32 \end{array}$$
 OK

d)
$$\begin{array}{r} 815 \\ - 18 \\ \hline 77 \end{array}$$
 regroup

e)
$$\begin{array}{r} 66 \\ - 54 \\ \hline 12 \end{array}$$
 OK

f)
$$\begin{array}{r} 714 \\ - 17 \\ \hline 67 \end{array}$$
 regroup

g)
$$\begin{array}{r} 712 \\ - 29 \\ \hline 53 \end{array}$$
 regroup

h)
$$\begin{array}{r} 26 \\ - 15 \\ \hline 11 \end{array}$$
 OK

i)
$$\begin{array}{r} 315 \\ - 9 \\ \hline 36 \end{array}$$
 regroup

j)
$$\begin{array}{r} 012 \\ - 8 \\ \hline 04 \end{array}$$
 regroup

k)
$$\begin{array}{r} 210 \\ - 19 \\ \hline 11 \end{array}$$
 regroup

l)
$$\begin{array}{r} 412 \\ - 9 \\ \hline 43 \end{array}$$
 regroup

m)
$$\begin{array}{r} 317 \\ - 19 \\ \hline \end{array}$$
 regroup

n)
$$\begin{array}{r} 413 \\ - 8 \\ \hline 15 \end{array}$$
 regroup

o)
$$\begin{array}{r} 510 \\ - 49 \\ \hline 11 \end{array}$$
 regroup

p)
$$\begin{array}{r} 710 \\ - 41 \\ \hline 39 \end{array}$$
 regroup

q)
$$\begin{array}{r} 813 \\ - 24 \\ \hline 69 \end{array}$$
 regroup

r)
$$\begin{array}{r} 79 \\ - 42 \\ \hline 37 \end{array}$$
 OK

Aurian January 7th 2023

Property of JUMP Math ID#2

3. Write in expanded form using numerals only. Then subtract.

a) $46 = 40 + 6$

$- 32 = 30 + 2$

$= 10 + 4$

$= 14$

b) $95 = 90 + 5$

$- 62 = 60 + 2$

$= 30 + 3$

$= 33$

c) $37 = 30 + 7$

$- 11 = 10 + 1$

$= 20 + 6$

$= 26$

d) $63 = 60 + 3$

$- 20 = 20 + 0$

$= 40 + 3$

$= 43$

e) $29 = 20 + 9$

$- 14 = 10 + 4$

$= 10 + 5$

$= 15$

f) $58 = 50 + 8$

$- 41 = 40 + 1$

$= 10 + 7$

$= 17$

4. Subtract the ones digits, then the tens digits.

a) 28

$- 12$

16

b) 48

$- 27$

21

c) 69

$- 53$

16

d) 49

$- 45$

04

e) 87

$- 53$

34

You can subtract 3-digit numbers by lining up the digits.

Example: $256 - 124$

Write hundreds under hundreds. Write tens under tens.

Write ones under ones.

Subtract ones. Subtract tens. Subtract hundreds.

	2	5	6
-	1	2	4
	1	3	2

5. Subtract. Start in the ones place.

a) 729

$- 316$

413

b) 895

$- 254$

641

c) 524

$- 401$

123

d) 398

$- 163$

235

e) 523

$- 310$

213

f) 958

$- 423$

535

g) 464

$- 261$

203

h) 378

$- 361$

017

Aurion Von Woolfgard

January 8th, 2023

Property of JUMP Math ID#5

4. Subtract, regrouping 1 hundred as 10 tens.

a)

$$\begin{array}{r} 2 11 \\ 8 8 5 \\ - 1 6 2 \\ \hline 7 2 3 \end{array}$$

b)

$$\begin{array}{r} 4 13 \\ 5 3 8 \\ - 2 9 5 \\ \hline 2 4 3 \end{array}$$

c)

$$\begin{array}{r} 2 11 \\ 3 1 7 \\ - 1 8 6 \\ \hline 1 3 1 \end{array}$$

d)

$$\begin{array}{r} 8 14 \\ 9 4 2 \\ - 5 7 0 \\ \hline 3 7 2 \end{array}$$

Yu subtracts $854 - 367$ by following these steps:

Step 1

$$\begin{array}{r} 4 14 \\ 8 5 4 \\ - 3 6 7 \\ \hline \end{array}$$

Step 2

$$\begin{array}{r} 4 14 \\ 8 5 4 \\ - 3 6 7 \\ \hline 7 \end{array}$$

Step 3

$$\begin{array}{r} 14 \\ 7 14 \\ 8 5 4 \\ - 3 6 7 \\ \hline 7 \end{array}$$

Step 4

$$\begin{array}{r} 14 \\ 7 14 \\ 8 5 4 \\ - 3 6 7 \\ \hline 8 7 \end{array}$$

Step 5

$$\begin{array}{r} 14 \\ 7 14 \\ 8 5 4 \\ - 3 6 7 \\ \hline 4 8 7 \end{array}$$

5. Subtract, regrouping twice.

a)

$$\begin{array}{r} 5 14 \\ 6 3 4 \\ - 1 5 6 \\ \hline 4 7 8 \end{array}$$

b)

$$\begin{array}{r} 4 15 \\ 5 8 5 \\ - 9 6 \\ \hline 4 8 9 \end{array}$$

c)

$$\begin{array}{r} 4 12 \\ 5 3 2 \\ - 2 3 5 \\ \hline 2 9 7 \end{array}$$

d)

$$\begin{array}{r} 7 14 \\ 8 5 4 \\ - 3 7 7 \\ \hline 4 7 7 \end{array}$$

e)

$$\begin{array}{r} 4 17 \\ 5 2 7 \\ - 3 8 8 \\ \hline 1 3 9 \end{array}$$

f)

$$\begin{array}{r} 8 15 \\ 9 1 5 \\ - 6 4 6 \\ \hline 2 6 9 \end{array}$$

g)

$$\begin{array}{r} 0 12 \\ 4 3 2 \\ - 4 7 \\ \hline 0 8 5 \end{array}$$

h)

$$\begin{array}{r} 2 12 \\ 6 3 4 2 \\ - 2 1 5 8 \\ \hline 4 1 8 4 \end{array}$$

i)

$$\begin{array}{r} 7 15 \\ 8 6 5 \\ - 3 9 7 \\ \hline 4 6 8 \end{array}$$

j)

$$\begin{array}{r} 6 11 \\ 7 2 0 \\ - 4 4 5 \\ \hline 2 7 5 \end{array}$$

k)

$$\begin{array}{r} 5 13 \\ 6 0 3 \\ - 2 4 8 \\ \hline 3 5 5 \end{array}$$

l)

$$\begin{array}{r} 3 10 \\ 5 4 1 0 \\ - 1 1 2 3 \\ \hline 4 2 8 7 \end{array}$$

6. Subtract, regrouping 1 thousand as 10 hundreds.

a)

$$\begin{array}{r} 7 13 \\ 8 8 6 4 \\ - 4 8 3 1 \\ \hline 3 5 3 3 \end{array}$$

b)

$$\begin{array}{r} 4 16 \\ 5 6 9 3 \\ - 2 7 1 1 \\ \hline 2 9 8 2 \end{array}$$

c)

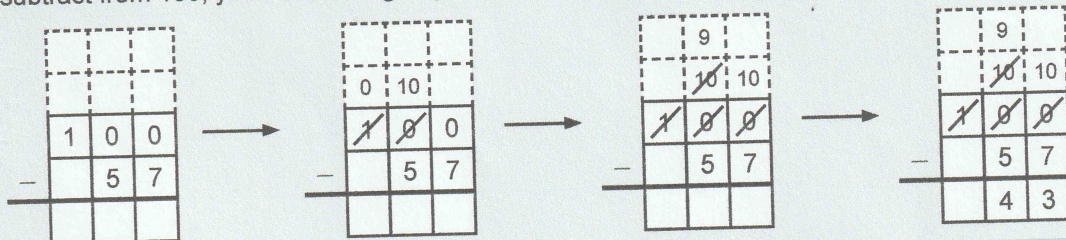
$$\begin{array}{r} 4 17 \\ 5 7 5 8 \\ - 2 9 4 2 \\ \hline 2 8 1 6 \end{array}$$

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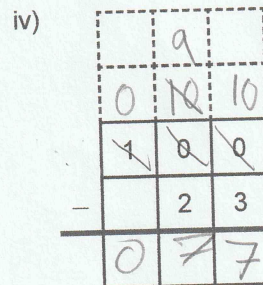
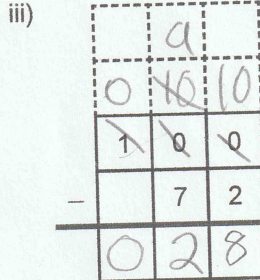
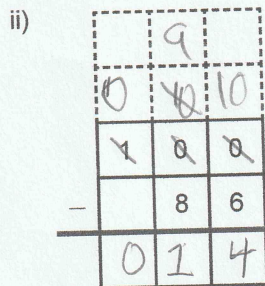
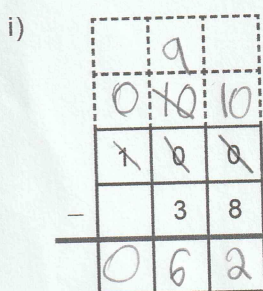
Property of JUMP Math ID#5

NS4-19 Subtracting from 100 and 1000

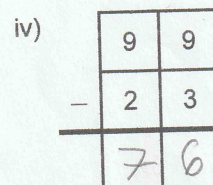
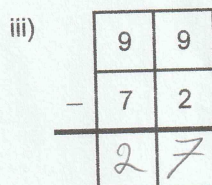
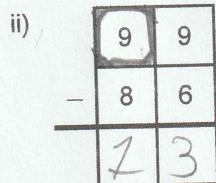
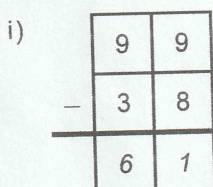
To subtract from 100, you need to regroup from the hundreds before you can regroup from the tens.



1. a) Subtract by regrouping.



b) Subtract from 99 without regrouping.



c) How do your answers to part a) and part b) compare? Why is this the case?

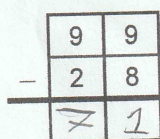
To subtract from 100 or 1000, first subtract from 99 or 999. Then add 1.

$$\begin{array}{r} 99 \\ - 27 \\ \hline 72 \end{array} \xrightarrow{\text{add 1}} \begin{array}{r} 100 \\ - 27 \\ \hline 73 \end{array}$$

$$\begin{array}{r} 999 \\ - 346 \\ \hline 653 \end{array} \xrightarrow{\text{add 1}} \begin{array}{r} 1000 \\ - 346 \\ \hline 654 \end{array}$$

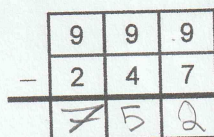
2. Subtract by using 99 or 999.

a) $100 - 28$



so $100 - 28 = 72$

b) $1000 - 247$



so $1000 - 247 = 753$

c) $1000 - 762$

d) $1000 - 84$

BONUS ▶

$10\,000 - 8290$

3. Subtract by writing the number of tens and ones in each number.

a) $36 = 30 + 6$

$- 24 = 20 + 4$

$= 10 + 2$

$= 12$

b) $84 = 80 + 4$

$- 52 = 50 + 2$

$= 30 + 2$

$= 32$

c) $98 = 90 + 8$

$- 37 = 30 + 7$

$= 60 + 1$

$= 61$

d) $73 = 70 + 3$

$- 12 = 10 + 2$

e) $26 = 20 + 6$

$- 24 = 20 + 4$

f) $88 = 80 + 8$

$- 33 = 30 + 3$

4. Subtract the number by subtracting the digits.

a) $\begin{array}{r} 54 \\ - 23 \\ \hline 31 \end{array}$

b) $\begin{array}{r} 86 \\ - 73 \\ \hline 13 \end{array}$

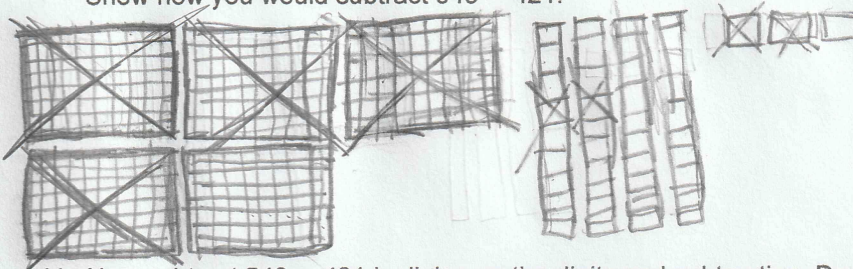
c) $\begin{array}{r} 36 \\ - 15 \\ \hline 21 \end{array}$

d) $\begin{array}{r} 64 \\ - 32 \\ \hline 32 \end{array}$

e) $\begin{array}{r} 95 \\ - 42 \\ \hline 53 \end{array}$

f) $\begin{array}{r} 89 \\ - 40 \\ \hline 49 \end{array}$

5. a) Draw a picture of 543 using hundreds, tens, and ones blocks. Show how you would subtract $543 - 421$.



$\begin{array}{r} 543 \\ - 421 \\ \hline 122 \end{array}$

$543 - 421 =$

b) Now subtract $543 - 421$ by lining up the digits and subtracting. Do you get the same answer?

$\begin{array}{r} 543 \\ - 421 \\ \hline 122 \end{array}$

$= 122$

Yes, I got the same Answer.

6. Subtract.

a) $\begin{array}{r} 7532 \\ - 4121 \\ \hline 3411 \end{array}$

b) $\begin{array}{r} 5356 \\ - 4245 \\ \hline 1111 \end{array}$

c) $\begin{array}{r} 5763 \\ - 3011 \\ \hline 2752 \end{array}$

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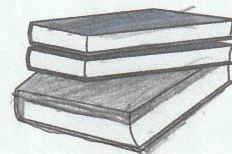
Property of JUMP Math ID#5

5. Lewis collected 75 books for charity and Emma collected 18 books. About how many did they collect altogether?

They have 93 books in total

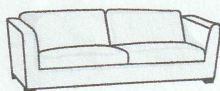
6. Class 4A collected 287 books and class 4B collected 476 books for charity.

- a) About how many books did 4A and 4B collect altogether? 763
b) Is your estimate higher or lower than the actual answer? How do you know?



My estimate was lower than the Actual answer, it was

7. A store has the following items for sale:



Sofa \$472



Armchair \$227



Table \$189



Desk \$382

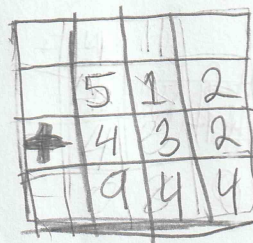


Lamp \$112

What could you buy if you had \$800 to spend? Estimate to find out. Then add the actual prices to check your estimate.

8. Ansel estimates $432 + 512$ as $400 + 500 = 900$.

- a) Calculate the actual sum.
b) Is Ansel's estimate higher or lower than the actual sum? Why does this make sense?



= 944

9. Tess adds numbers. Use estimation to decide whether her answers are reasonable.

a) $378 + 463 = 1021$

b) $3516 + 4209 = 7725$

c) $2435 + 3351 = 4786$

10. Round the number to each place value.

	Tens	Hundreds	Thousands
a) 3485	88	445	35
b) 8502	0	5	8
BONUS ► 9697	9	6	9

- BONUS ► Write every number that fits all three statements.

When rounded to the nearest ten, it is 6500.

When rounded to the nearest hundred, it is 6500.

When rounded to the nearest thousand, it is 6000.

- BONUS ► The estimated difference between two numbers is 400. What might the original numbers be?

6. Sandy has 243 marbles. Tony has 178 marbles.

a) How many marbles do they have in total?

They have 421 marble's in total.

b) How do you know that Sandy has more marbles than Tony?

I did the math.

c) How many more marbles does Sandy have? Show your work.

65

7. Find the mistake in Glen's work.

4	10		16		5	13		3	13	3	14
5	8		5	6	5	8		5	6	3	
4	8	-	4	8	2	4	-	2	4		
0	8		1	8	5	3	9	3	2	3	

8. A ferry between Prince Edward Island and Nova Scotia holds 200 cars. By 8:00 a.m., 73 cars arrive. By 9:00 a.m., 84 more cars arrive.

a) How many cars in total arrive by 9:00 a.m.?

157

b) How many more cars can be loaded before the ferry is full?

43

9. Place the numbers 1, 2, 3, 4, 5, 6 in the top six boxes to make the largest possible sum.

	5	3	6
+	4	2	1
	9	5	7

10. Place the numbers 1, 2, 3, 4 in the top four boxes to make the largest possible difference.

	2	4
-	1	3
	2	1

11. Here are the maximum depths of the Great Lakes.

a) Write the depths in order from least to greatest.

b) How much deeper is Lake Superior than Lake Michigan?

c) How much deeper is Lake Huron than Lake Erie?

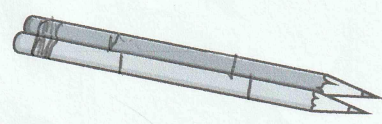
165 deeper than lake Erie.

Maximum Depths of the Great Lakes	
Lake Superior	406 m
Lake Michigan	281 m
Lake Huron	229 m
Lake Erie	64 m
Lake Ontario	244 m

406m
281m
244m
229m
64m

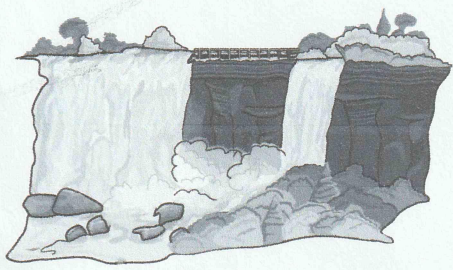
NS3-17 Problems and Puzzles

1. Tasha has 12 pencil crayons. 8 are at home and the rest are at school.



- a) How many pencil crayons are at school?
- b) How did you solve the problem? (Did you use a calculation? Make a model? Draw a picture?)

2. Takakkaw Falls in British Columbia is 302 m tall. The Canadian Horseshoe Falls in Ontario is 57 m tall.



- a) Which waterfall is taller? How do you know?
- b) How much taller is the taller waterfall?

3. Rani wants to add the numbers. She starts by adding the ones digits. Explain why Rani wrote the number 1 above the 3.

a)

	1	
	3	5
+	4	9
	8	4

b)

	1		
	3	6	7
+	2	4	1
	6	0	8

Rani put the one above the 3 because it's not like she can put 14 in one box at the answer, she has to carry the one to find her answer.

4. Find the mistake in Ben's work.

a)

	2		
	4	7	
+	2	5	
	8	1	

b)

	1		
	4	7	
+	2	5	
	7	2	

c)

	1		
	3	9	
+	5		
	4	4	

d)

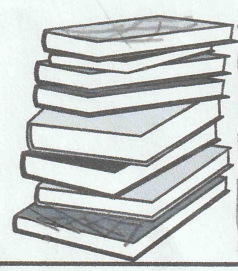
	1		
	5	8	
+	2	6	0
	8	4	0

e)

	1		
	2	6	0
+		5	8
	3	1	8

5. Jin has 17 books. Tina has 35 books.

- a) How many more books does Tina have than Jin?
- b) How many books do they have altogether?



	2	15
	8	15
+	1	15
	7	15

Tina has 18 more books than Jin

Tina & Jin's books put together would equal 52 books in total! (That's a lot of books)

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January 8th, 2023

Property of JUMP Math ID#5

NS4-18 Subtraction Strategies

1. Subtract mentally.

- a) $9 - 5 = 4$ b) $29 - 6 = 23$ c) $38 - 4 = 34$ d) $57 - 2 = 55$
 e) $459 - 6 = 453$ f) $787 - 3 = 784$ g) $986 - 4 = 982$ h) $679 - 7 = 672$
 i) $1928 - 5 = 1923$ j) $1259 - 4 = 1256$ k) $9867 - 5 = 9862$ l) $1028 - 3 = 1025$

2. Subtract the ones, then subtract the rest.

a) $46 - 9 = 46 - \overset{9}{\begin{array}{c} 6 \\ 3 \end{array}} = 40 - 3 = \underline{\quad}$

b) $53 - 6 = 53 - \overset{6}{\begin{array}{c} 3 \\ 3 \end{array}} = \underline{\quad} - \underline{\quad} = \underline{\quad}$

c) $72 - 8 = 72 - \underline{\quad} - \underline{\quad} = \underline{\quad} - \underline{\quad} = \underline{\quad}$

d) $65 - 7 = 65 - \underline{\quad} - \underline{\quad} = \underline{\quad} - \underline{\quad} = \underline{\quad}$

e) $103 - 6 = 103 - \underline{\quad} - \underline{\quad} = \underline{\quad} - \underline{\quad} = \underline{\quad}$

f) $245 - 9 = 245 - \underline{\quad} - \underline{\quad} = \underline{\quad} - \underline{\quad} = \underline{\quad}$

I don't
Know

3. Subtract mentally.

- a) $23 - 4 = 19$ b) $31 - 3 = 28$ c) $42 - 4 = 38$ d) $65 - 6 = 59$
 e) $58 - 9 = 49$ f) $76 - 8 = 68$ g) $95 - 7 = 88$ h) $84 - 5 = 79$

4. Subtract 9 by subtracting 10, and then adding 1.

a) $42 - 9 = (42 - 10) + 1 = 32 + 1 = 33$

b) $57 - 9 = (57 - 10) + 1 = \underline{\quad} + 1 = \underline{\quad}$

c) $64 - 9 = (64 - \underline{\quad}) + 1 = \underline{\quad} + 1 = \underline{\quad}$

d) $73 - 9 = (73 - \underline{\quad}) + 1 = \underline{\quad} + 1 = \underline{\quad}$

e) $81 - 9 = (81 - \underline{\quad}) + 1 = \underline{\quad} + 1 = \underline{\quad}$

f) $95 - 9 = (95 - \underline{\quad}) + 1 = \underline{\quad} + 1 = \underline{\quad}$

g) $33 - 9 = \underline{\quad} + 1 = \underline{\quad}$

h) $26 - 9 = \underline{\quad} + 1 = \underline{\quad}$

I don't
Know

5. Subtract mentally.

- a) $48 - 9 = 39$ b) $76 - 9 = 67$ c) $37 - 9 = 28$ d) $52 - 9 = 43$
 e) $61 - 9 = 52$ f) $80 - 9 = 71$ g) $53 - 9 = 44$ h) $24 - 9 = 15$



6. Subtract 8 by subtracting 10, and then adding 2.

a) $42 - 8 = (42 - 10) + 2 = 32 + 2 = 34$

b) $57 - 8 = (57 - 10) + 2 = \underline{\quad} + 2 = \underline{\quad}$

c) $65 - 8 = (65 - \underline{\quad}) + 2 = \underline{\quad} + 2 = \underline{\quad}$

d) $96 - 8 = (96 - \underline{\quad}) + 2 = \underline{\quad} + 2 = \underline{\quad}$

e) $23 - 8 = \underline{\quad} + 2 = \underline{\quad}$

f) $84 - 8 = \underline{\quad} + 2 = \underline{\quad}$

I don't know

7. Subtract mentally.

a) $46 - 8 = 38$

b) $75 - 8 = 67$

c) $57 - 8 = 49$

d) $22 - 8 = 14$

e) $31 - 8 = 23$

f) $60 - 8 = 52$

g) $93 - 8 = 85$

h) $14 - 8 = 6$

8. Subtract 19 by subtracting 20, and then adding 1.

a) $42 - 19 = (42 - 20) + 1 = 22 + 1 = 23$

b) $57 - 19 = (57 - 20) + 1 = \underline{\quad} + 1 = \underline{\quad}$

c) $64 - 19 = (64 - \underline{\quad}) + 1 = \underline{\quad} + 1 = \underline{\quad}$

d) $73 - 19 = (73 - \underline{\quad}) + 1 = \underline{\quad} + 1 = \underline{\quad}$

e) $95 - 19 = (95 - \underline{\quad}) + \underline{\quad} = \underline{\quad} + \underline{\quad} = \underline{\quad}$

f) $281 - 19 = \underline{\quad} + 1 = \underline{\quad}$

g) $326 - 19 = \underline{\quad} + \underline{\quad} = \underline{\quad}$

I don't know

9. Subtract by rounding up, and then adding 1 or 2.

a) $62 - 49 = (62 - 50) + 1 = 12 + 1 = 13$

b) $57 - 28 = (57 - 30) + 2 = \underline{\quad} + 2 = \underline{\quad}$

c) $64 - 38 = (64 - \underline{\quad}) + \underline{\quad} = \underline{\quad} + \underline{\quad} = \underline{\quad}$

d) $73 - 59 = (73 - \underline{\quad}) + \underline{\quad} = \underline{\quad} + \underline{\quad} = \underline{\quad}$

e) $281 - 29 = (281 - \underline{\quad}) + \underline{\quad} = \underline{\quad} + \underline{\quad} = \underline{\quad}$

f) $95 - 78 = (95 - \underline{\quad}) + \underline{\quad} = \underline{\quad} + \underline{\quad} = \underline{\quad}$

I don't know

10. Ronin has 34 stickers. He bought 48 more stickers for his sticker collection. He gave 39 stickers to his brother. How many stickers does he have now?

He has 43 left.

11. Josh is reading a book that is 214 pages long. He reads 9 pages each night. How many pages will he have left after 3 nights?

He has 177 pages left.

12. 264 students are going to travel by bus on a school trip. Each bus holds 98 students. If the first two buses are full, how many students are on the third bus?

68 students on the third bus.