

Name: _____

PLACE VALUE & SUBTRACTION

Algorithm Lab • Tens, Ones, and Exchange

Objective: *Subtract by place value, exchanging units without changing the quantity.*

DO THIS Show each number by place value. Exchange a unit when you need to, then subtract.

EXCHANGE One ten is ten ones — the quantity does not change.

EXAMPLE

T	O
5	2

1 ten becomes 10 ones

$$\begin{array}{r} 52 \\ - 28 \\ \hline 24 \end{array}$$

52 = 40 + 12.

Exchange one ten for ten ones, then subtract.

BUILD & SUBTRACT Show the number, then subtract by place value.

1

Th	H	T	O
6	4	1	4

$$\begin{array}{r} 6414 \\ - 1465 \\ \hline \end{array}$$

2

Th	H	T	O
4	0	6	3

$$\begin{array}{r} 4063 \\ - 1610 \\ \hline \end{array}$$

3

Th	H	T	O
9	9	6	2

$$\begin{array}{r} 9962 \\ - 9408 \\ \hline \end{array}$$

INDEPENDENT PRACTICE Subtract. Keep your columns aligned.

1

$$\begin{array}{r} 5665 \\ - 2662 \\ \hline \end{array}$$

2

$$\begin{array}{r} 5429 \\ - 3970 \\ \hline \end{array}$$

3

$$\begin{array}{r} 6689 \\ - 5293 \\ \hline \end{array}$$

4

$$\begin{array}{r} 9851 \\ - 5155 \\ \hline \end{array}$$

5

$$\begin{array}{r} 2891 \\ - 1597 \\ \hline \end{array}$$

6

$$\begin{array}{r} 3150 \\ - 2137 \\ \hline \end{array}$$

7

$$\begin{array}{r} 9546 \\ - 8108 \\ \hline \end{array}$$

8

$$\begin{array}{r} 2745 \\ - 2490 \\ \hline \end{array}$$

9

$$\begin{array}{r} 6045 \\ - 3270 \\ \hline \end{array}$$

PROVE IT Check with addition.

1 $1128 + \square = 9188$

2 $1614 + \square = 1895$

3 $1780 + \square = 4646$

To subtract I: ☐ exchanged a unit ☐ kept columns aligned ☐ checked with addition

TEACHER EDITION

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Objective: *Subtract by place value, exchanging units without changing the quantity.*

DO THIS Show each number by place value. Exchange a unit when you need to, then subtract.

EXCHANGE One ten is ten ones — the quantity does not change.

EXAMPLE

T	O
5	2

$$\begin{array}{r} 52 \\ - 28 \\ \hline 24 \end{array}$$

1 ten becomes 10 ones

$$52 = 40 + 12.$$

Exchange one ten for ten ones, then subtract.

BUILD & SUBTRACT Show the number, then subtract by place value.

1

Th	H	T	O
6	4	1	4

$$\begin{array}{r} 6414 \\ - 1465 \\ \hline 4949 \end{array}$$

2

Th	H	T	O
4	0	6	3

$$\begin{array}{r} 4063 \\ - 1610 \\ \hline 2453 \end{array}$$

3

Th	H	T	O
9	9	6	2

$$\begin{array}{r} 9962 \\ - 9408 \\ \hline 554 \end{array}$$

INDEPENDENT PRACTICE Subtract. Keep your columns aligned.

1

$$\begin{array}{r} 5665 \\ - 2662 \\ \hline 3003 \end{array}$$

2

$$\begin{array}{r} 5429 \\ - 3970 \\ \hline 1459 \end{array}$$

3

$$\begin{array}{r} 6689 \\ - 5293 \\ \hline 1396 \end{array}$$

4

$$\begin{array}{r} 9851 \\ - 5155 \\ \hline 4696 \end{array}$$

5

$$\begin{array}{r} 2891 \\ - 1597 \\ \hline 1294 \end{array}$$

6

$$\begin{array}{r} 3150 \\ - 2137 \\ \hline 1013 \end{array}$$

7

$$\begin{array}{r} 9546 \\ - 8108 \\ \hline 1438 \end{array}$$

8

$$\begin{array}{r} 2745 \\ - 2490 \\ \hline 255 \end{array}$$

9

$$\begin{array}{r} 6045 \\ - 3270 \\ \hline 2775 \end{array}$$

PROVE IT Check with addition.

1 $1128 + \underline{8060} = 9188$

2 $1614 + \underline{281} = 1895$

3 $1780 + \underline{2866} = 4646$

TEACHER NOTES Answer key & guidance

Answers: aligned vertical differences

Common error: Subtracting the smaller digit from the larger in each column

Strategy: Rename one unit as ten of the next-smaller unit

Prompt: "Do you have enough ones, or must you exchange a ten?"

To subtract I: ☐ exchanged a unit ☐ kept columns aligned ☐ checked with addition