

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

H	T	O
4	3	7

$$\begin{array}{r} 437 \\ - 106 \\ \hline \end{array}$$

2

H	T	O
4	6	5

$$\begin{array}{r} 465 \\ - 207 \\ \hline \end{array}$$

3

H	T	O
6	0	4

$$\begin{array}{r} 604 \\ - 384 \\ \hline \end{array}$$

INDEPENDENT PRACTICE Subtract. Keep your columns aligned.

1

$$\begin{array}{r} 922 \\ - 621 \\ \hline \end{array}$$

2

$$\begin{array}{r} 427 \\ - 422 \\ \hline \end{array}$$

3

$$\begin{array}{r} 531 \\ - 109 \\ \hline \end{array}$$

4

$$\begin{array}{r} 378 \\ - 184 \\ \hline \end{array}$$

5

$$\begin{array}{r} 280 \\ - 188 \\ \hline \end{array}$$

6

$$\begin{array}{r} 300 \\ - 142 \\ \hline \end{array}$$

7

$$\begin{array}{r} 473 \\ - 438 \\ \hline \end{array}$$

8

$$\begin{array}{r} 689 \\ - 442 \\ \hline \end{array}$$

9

$$\begin{array}{r} 570 \\ - 225 \\ \hline \end{array}$$

PROVE IT Check with addition.

1 $207 + \square = 280$

2 $275 + \square = 441$

3 $454 + \square = 818$

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

H	T	O
4	3	7

$$\begin{array}{r} 437 \\ - 106 \\ \hline 331 \end{array}$$

2

H	T	O
4	6	5

$$\begin{array}{r} 465 \\ - 207 \\ \hline 258 \end{array}$$

3

H	T	O
6	0	4

$$\begin{array}{r} 604 \\ - 384 \\ \hline 220 \end{array}$$

INDEPENDENT PRACTICE Subtract. Keep your columns aligned.

1

$$\begin{array}{r} 922 \\ - 621 \\ \hline 301 \end{array}$$

2

$$\begin{array}{r} 427 \\ - 422 \\ \hline 5 \end{array}$$

3

$$\begin{array}{r} 531 \\ - 109 \\ \hline 422 \end{array}$$

4

$$\begin{array}{r} 378 \\ - 184 \\ \hline 194 \end{array}$$

5

$$\begin{array}{r} 280 \\ - 188 \\ \hline 92 \end{array}$$

6

$$\begin{array}{r} 300 \\ - 142 \\ \hline 158 \end{array}$$

7

$$\begin{array}{r} 473 \\ - 438 \\ \hline 35 \end{array}$$

8

$$\begin{array}{r} 689 \\ - 442 \\ \hline 247 \end{array}$$

9

$$\begin{array}{r} 570 \\ - 225 \\ \hline 345 \end{array}$$

PROVE IT Check with addition.

1 $207 + \underline{73} = 280$

2 $275 + \underline{166} = 441$

3 $454 + \underline{364} = 818$

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