

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

T	O
2	0

$$\begin{array}{r} 20 \\ - 12 \\ \hline \end{array}$$

2

T	O
4	8

$$\begin{array}{r} 48 \\ - 34 \\ \hline \end{array}$$

3

T	O
9	2

$$\begin{array}{r} 92 \\ - 27 \\ \hline \end{array}$$

4

T	O
3	4

$$\begin{array}{r} 34 \\ - 21 \\ \hline \end{array}$$

INDEPENDENT PRACTICE Subtract. Keep your columns aligned.

1

$$\begin{array}{r} 30 \\ - 18 \\ \hline \end{array}$$

2

$$\begin{array}{r} 32 \\ - 22 \\ \hline \end{array}$$

3

$$\begin{array}{r} 55 \\ - 21 \\ \hline \end{array}$$

4

$$\begin{array}{r} 71 \\ - 58 \\ \hline \end{array}$$

5

$$\begin{array}{r} 31 \\ - 19 \\ \hline \end{array}$$

6

$$\begin{array}{r} 37 \\ - 27 \\ \hline \end{array}$$

PROVE IT Check with addition.

1 $38 + \square = 98$

2 $12 + \square = 88$

3 $12 + \square = 87$

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

TEACHER EDITION

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$$52 = 40 + 12.$$

Exchange one ten for ten ones, then subtract.

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

1

T	O
2	0

$$\begin{array}{r} 20 \\ - 12 \\ \hline 8 \end{array}$$

2

T	O
4	8

$$\begin{array}{r} 48 \\ - 34 \\ \hline 14 \end{array}$$

3

T	O
9	2

$$\begin{array}{r} 92 \\ - 27 \\ \hline 65 \end{array}$$

4

T	O
3	4

$$\begin{array}{r} 34 \\ - 21 \\ \hline 13 \end{array}$$

INDEPENDENT PRACTICE Subtract. Keep your columns aligned.

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$$\begin{array}{r} 30 \\ - 18 \\ \hline 12 \end{array}$$

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$$\begin{array}{r} 32 \\ - 22 \\ \hline 10 \end{array}$$

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$$\begin{array}{r} 55 \\ - 21 \\ \hline 34 \end{array}$$

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$$\begin{array}{r} 71 \\ - 58 \\ \hline 13 \end{array}$$

5

$$\begin{array}{r} 31 \\ - 19 \\ \hline 12 \end{array}$$

6

$$\begin{array}{r} 37 \\ - 27 \\ \hline 10 \end{array}$$

PROVE IT Check with addition.

1 $38 + \underline{60} = 98$

2 $12 + \underline{76} = 88$

3 $12 + \underline{75} = 87$

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