FAITH THINKERS
Traditional Arithmetic & Logic

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
9	0

$$\begin{array}{r} 90 \\ -\ 54 \\ \hline \end{array}$$

2

T	O
3	6

$$\begin{array}{r} 36 \\ -\ 31 \\ \hline \end{array}$$

3

T	O
5	8

$$\begin{array}{r} 58 \\ -\ 56 \\ \hline \end{array}$$

4

T	O
6	7

$$\begin{array}{r} 67 \\ -\ 52 \\ \hline \end{array}$$

INDEPENDENT PRACTICE Subtract. Keep your columns aligned.

1
$$\begin{array}{r} 26 \\ -\ 15 \\ \hline \end{array}$$

2
$$\begin{array}{r} 72 \\ -\ 66 \\ \hline \end{array}$$

3
$$\begin{array}{r} 19 \\ -\ 11 \\ \hline \end{array}$$

4
$$\begin{array}{r} 57 \\ -\ 15 \\ \hline \end{array}$$

PROVE IT Check with addition.

1. 26 + ☐ = 54
2. 27 + ☐ = 41
3. 19 + ☐ = 66

To subtract 1: ☐ exchanged a unit ☐ kept columns aligned ☐ checked with addition

FAITH THINKERS
Traditional Arithmetic & Logic

Name: _____

TEACHER EDITION

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
9	0

$$\begin{array}{r} 90 \\ -\ 54 \\ \hline 36 \end{array}$$

2

T	O
3	6

$$\begin{array}{r} 36 \\ -\ 31 \\ \hline 5 \end{array}$$

3

T	O
5	8

$$\begin{array}{r} 58 \\ -\ 56 \\ \hline 2 \end{array}$$

4

T	O
6	7

$$\begin{array}{r} 67 \\ -\ 52 \\ \hline 15 \end{array}$$

INDEPENDENT PRACTICE Subtract. Keep your columns aligned.

1
$$\begin{array}{r} 26 \\ -\ 15 \\ \hline 11 \end{array}$$

2
$$\begin{array}{r} 72 \\ -\ 66 \\ \hline 6 \end{array}$$

3
$$\begin{array}{r} 19 \\ -\ 11 \\ \hline 8 \end{array}$$

4
$$\begin{array}{r} 57 \\ -\ 15 \\ \hline 42 \end{array}$$

PROVE IT Check with addition.

1. 26 + 28 = 54
2. 27 + 14 = 41
3. 19 + 47 = 66

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