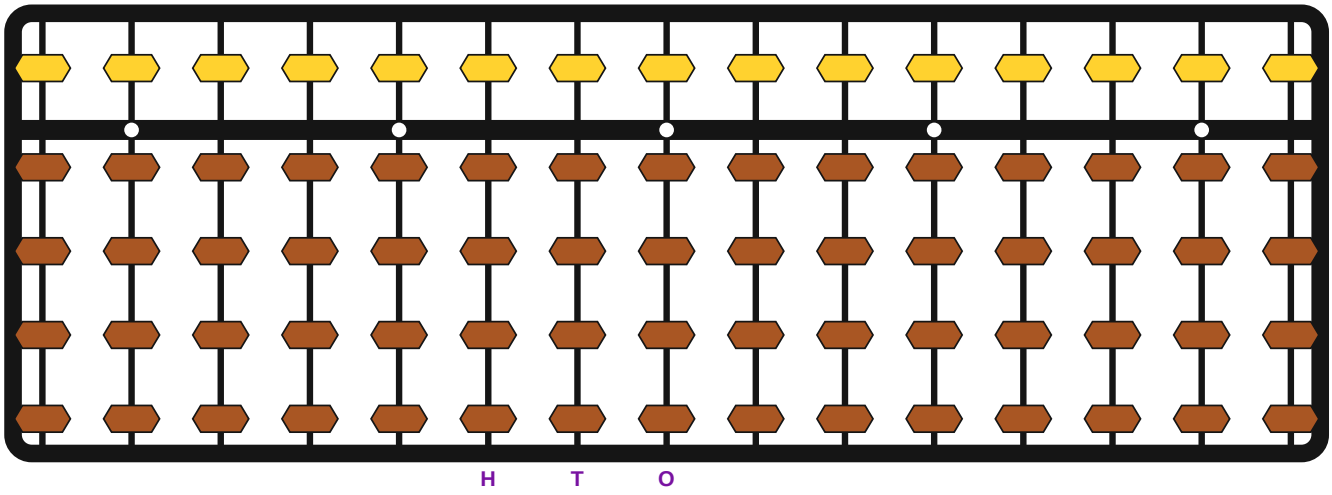
FLUFFY FEET ACADEMY

SOROBAN LEARNER WORKBOOK

LEVEL 1 | Corrected teaching edition | Name: _____

DISCOVER • MOVE • READ • CALCULATE

Our signature 15-rod Soroban



One’s rod = 8th from the left. Ten’s rod = 7th. Hundred’s rod = 6th. Five white reference circles: rods 2, 5, 8, 11, 14 only.

Each yellow upper bead is worth 5. Each brown lower bead is worth 1. Beads count only when moved towards the centre bar.

Learner: _____

Class / Age: _____

Teacher: _____

TEACHER & PARENT GUIDE

A precise sequence for beginner Soroban learning

1 • Identify

Frame, rods, centre bar, upper and lower beads.

2 • Build 0–9

Only the Ones rod (rod 8); distinguish 0 from 5.

3 • Read H / T / O

Hundreds on rod 6, tens on rod 7, ones on rod 8.

4 • Direct operations

Practise additions and subtractions that do not require bead exchanges.

5 • Friends of 5

Introduce the exchanges 1+4, 2+3 and their reversals.

6 • Check mastery

Observe bead movements as well as written answers.

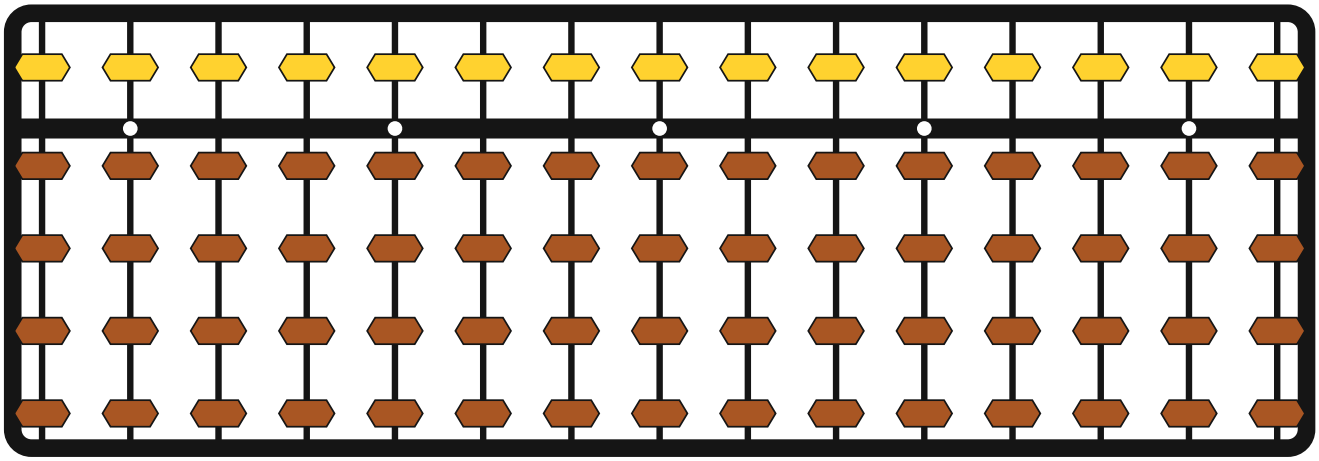
Important teaching rules

An answer can be arithmetically correct even when a learner's bead method is not yet secure. In direct-movement exercises, do not ask the learner to use a complement exchange.

Use a real Soroban or the app for motion; printed diagrams are static reference states.

LESSON 1 • KNOW YOUR SOROBAN

Identify every part and locate the three place-value rods



1. Yellow bead = _____

2. Brown beads = _____

3. Horizontal divider = _____

4. Outer border = _____

5. Ones rod number = _____

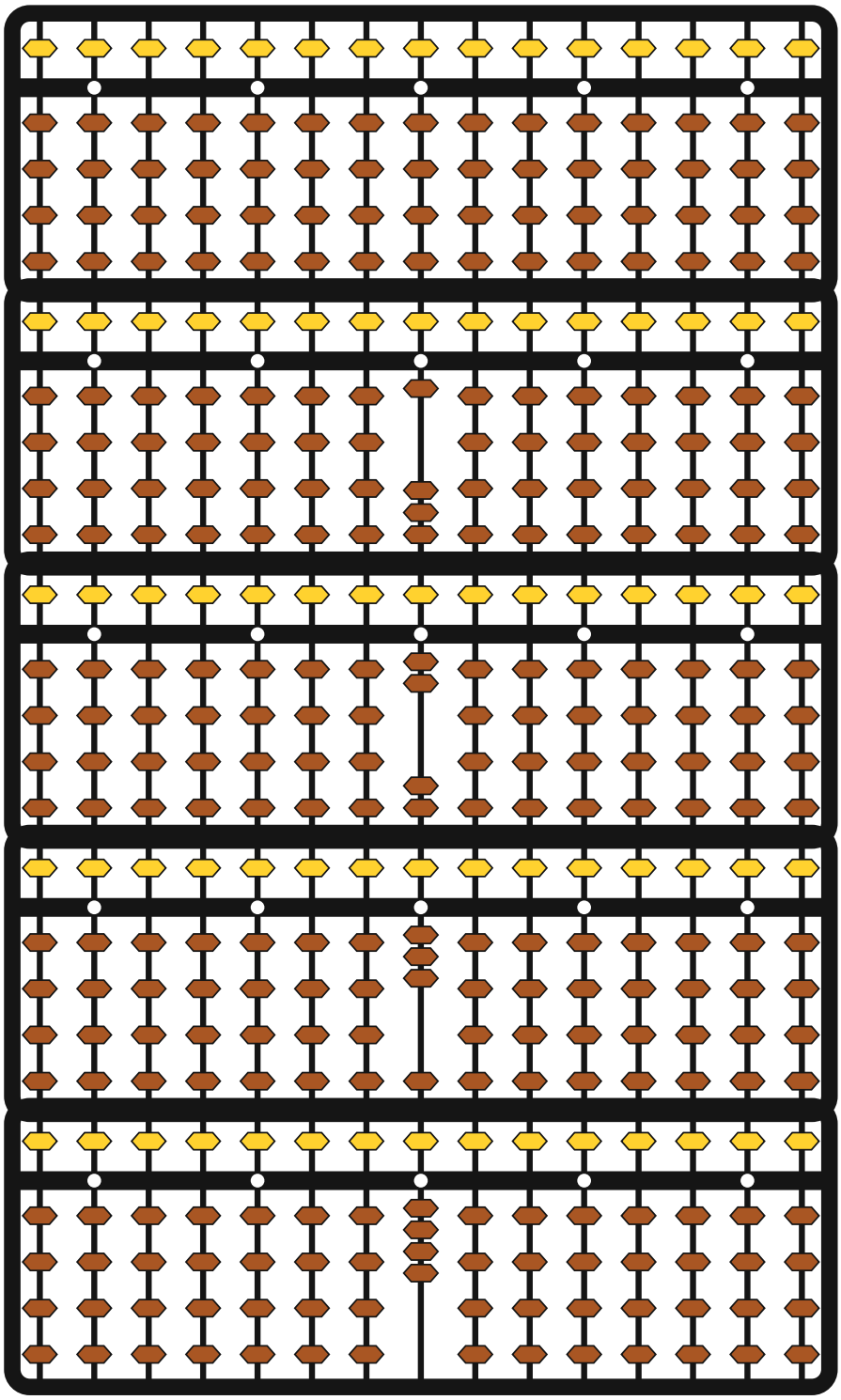
6. Tens rod number = _____

7. Hundreds rod number = _____

Teacher check: learner can point to each item.

LESSON 2 • NUMBERS 0–4

Ones rod = rod 8 | Trace, say and rebuild each number



VALUE = 0

Trace: _____

Build: ■

VALUE = 1

Trace: _____

Build: ■

VALUE = 2

Trace: _____

Build: ■

VALUE = 3

Trace: _____

Build: ■

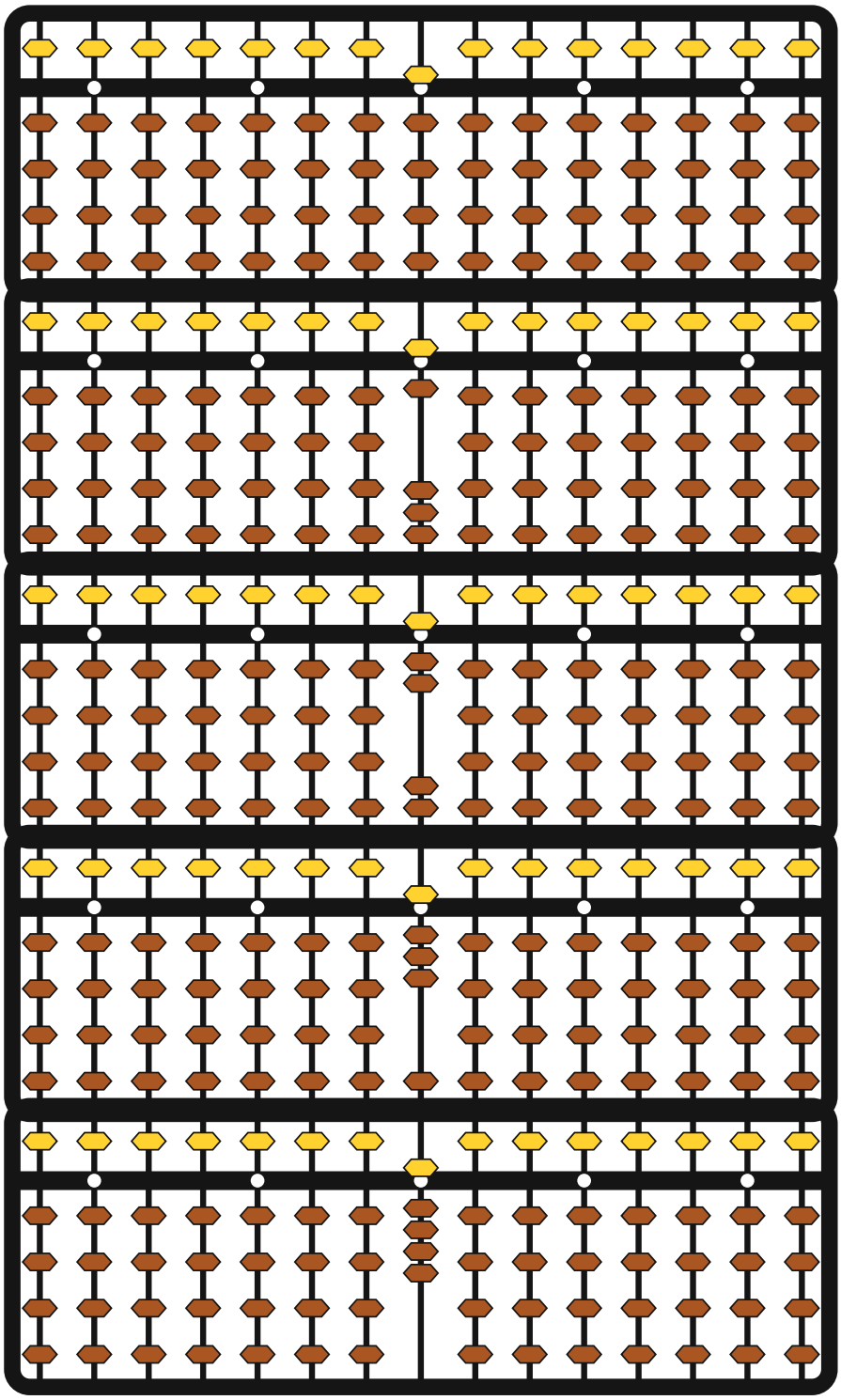
VALUE = 4

Trace: _____

Build: ■

LESSON 3 • NUMBERS 5–9

Ones rod = rod 8 | Trace, say and rebuild each number



VALUE = 5

Trace: _____

Build: ■

VALUE = 6

Trace: _____

Build: ■

VALUE = 7

Trace: _____

Build: ■

VALUE = 8

Trace: _____

Build: ■

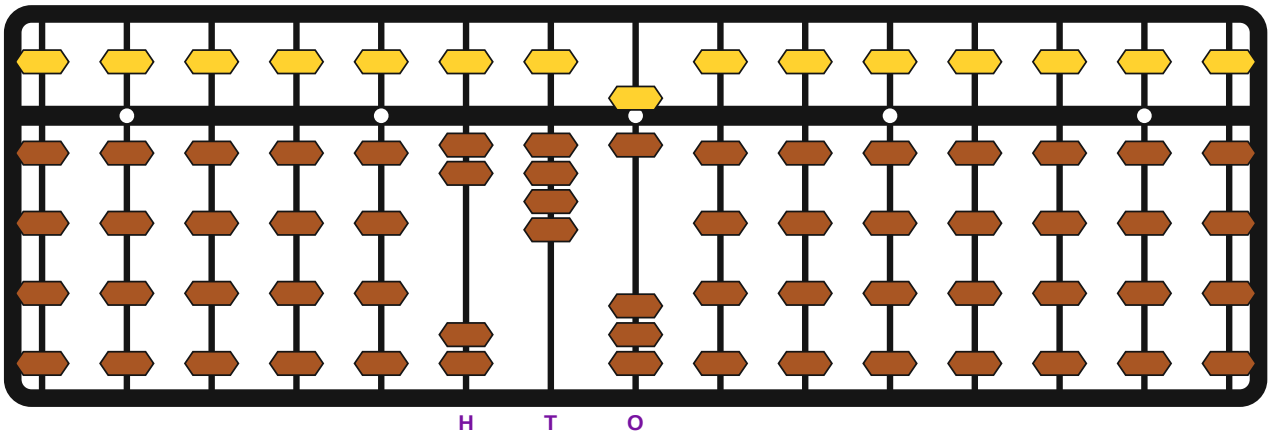
VALUE = 9

Trace: _____

Build: ■

LESSON 4 • PLACE VALUE

Read and build hundreds, tens and ones



246 = 2 hundreds + 4 tens + 6 ones

123 = ___ H + ___ T + ___ O

250 = ___ H + ___ T + ___ O

405 = ___ H + ___ T + ___ O

806 = ___ H + ___ T + ___ O

682 = ___ H + ___ T + ___ O

570 = ___ H + ___ T + ___ O

709 = ___ H + ___ T + ___ O

194 = ___ H + ___ T + ___ O

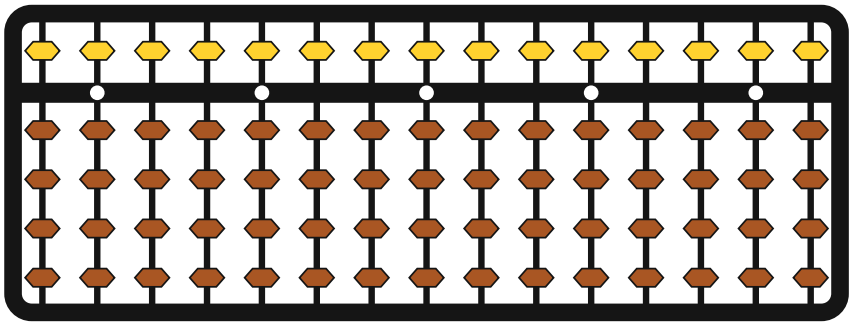
931 = ___ H + ___ T + ___ O

999 = ___ H + ___ T + ___ O

H = rod 6 T = rod 7 O = rod 8

LESSON 5 • BUILD NUMBERS (1/3)

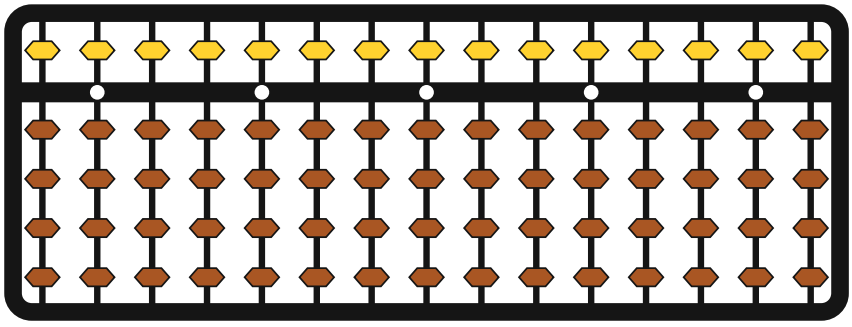
Copy each number onto the three middle rods; use all 15 rods as a guide



SHOW 7

Teacher ✓ ■

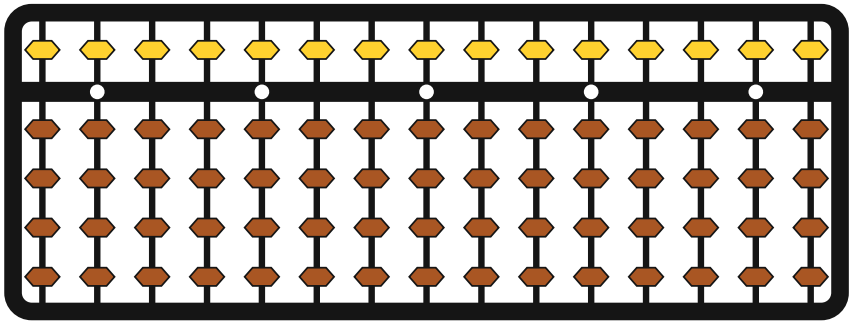
Read: _____



SHOW 3

Teacher ✓ ■

Read: _____



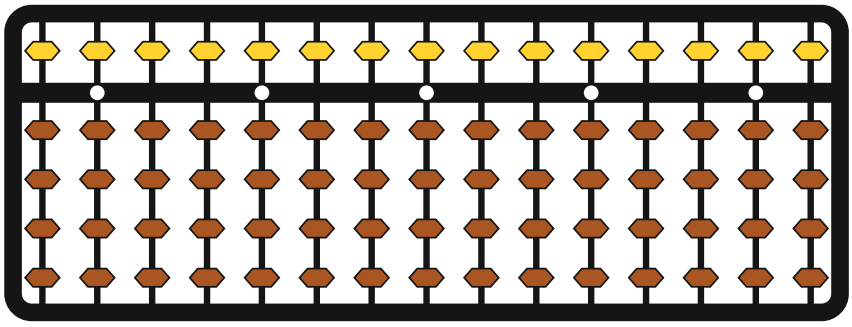
SHOW 9

Teacher ✓ ■

Read: _____

LESSON 5 • BUILD NUMBERS (2/3)

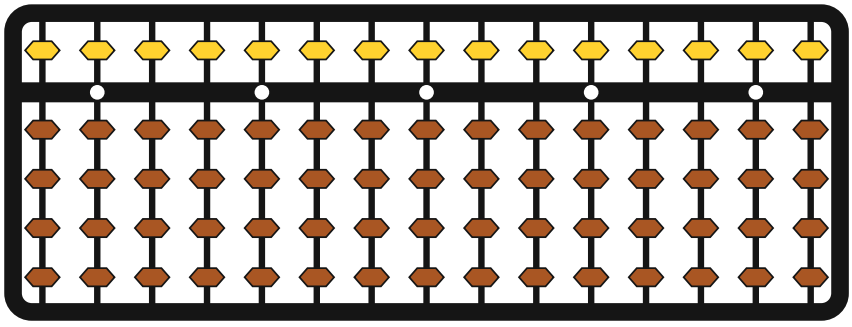
Copy each number onto the three middle rods; use all 15 rods as a guide



SHOW 6

Teacher ✓ ■

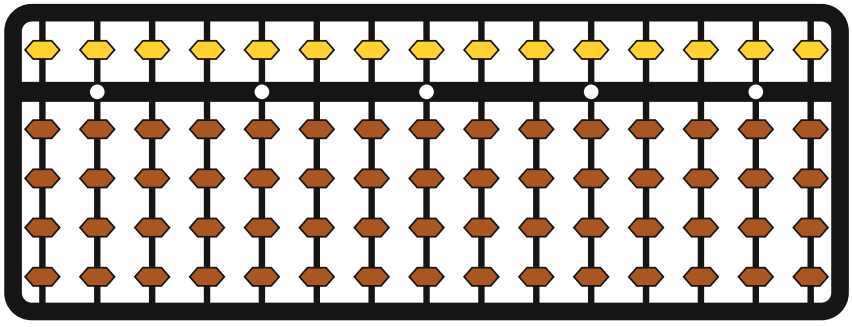
Read: _____



SHOW 40

Teacher ✓ ■

Read: _____



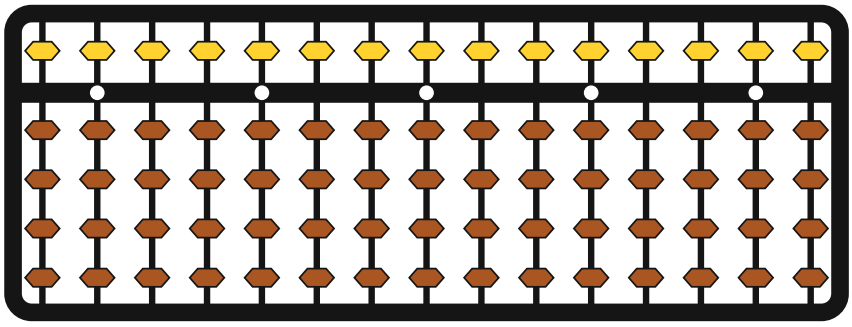
SHOW 52

Teacher ✓ ■

Read: _____

LESSON 5 • BUILD NUMBERS (3/3)

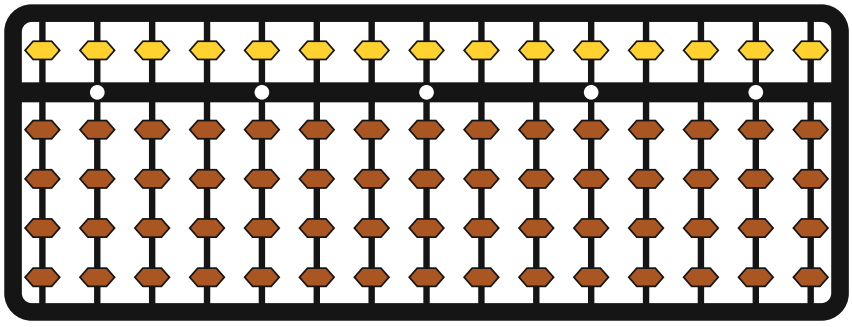
Copy each number onto the three middle rods; use all 15 rods as a guide



SHOW 81

Teacher ✓ ■

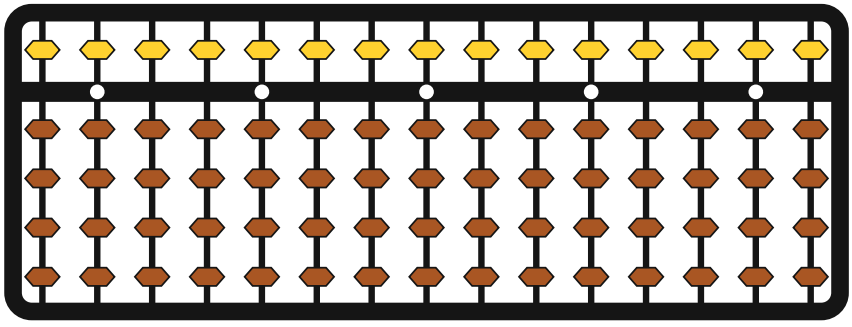
Read: _____



SHOW 90

Teacher ✓ ■

Read: _____



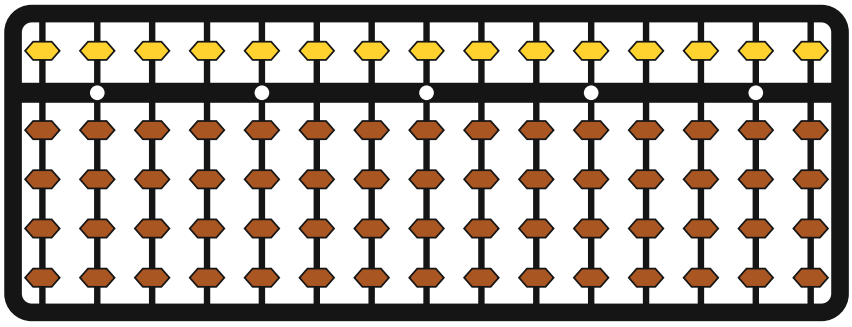
SHOW 105

Teacher ✓ ■

Read: _____

LESSON 5 • BUILD NUMBERS (4/3)

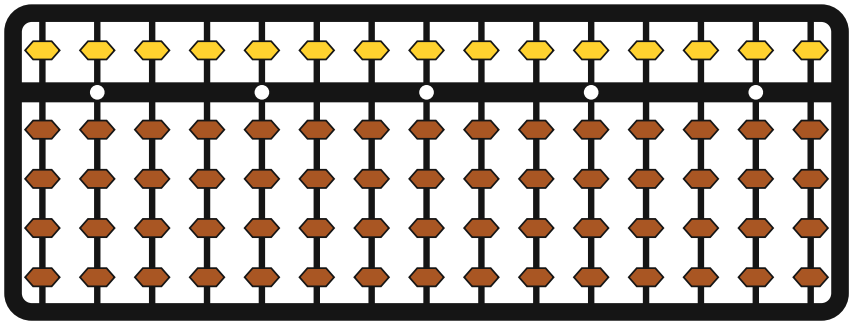
Copy each number onto the three middle rods; use all 15 rods as a guide



SHOW 214

Teacher ✓ ■

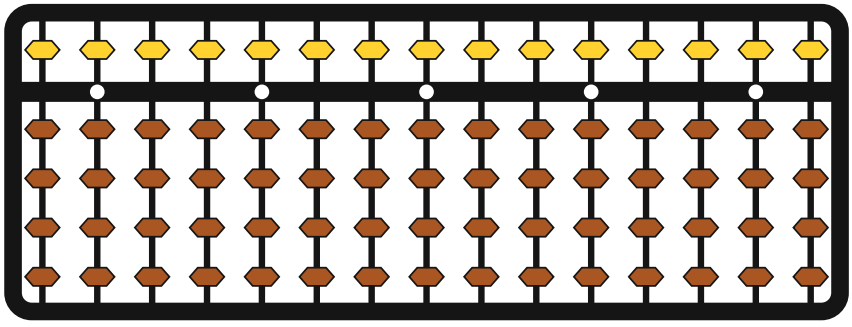
Read: _____



SHOW 380

Teacher ✓ ■

Read: _____



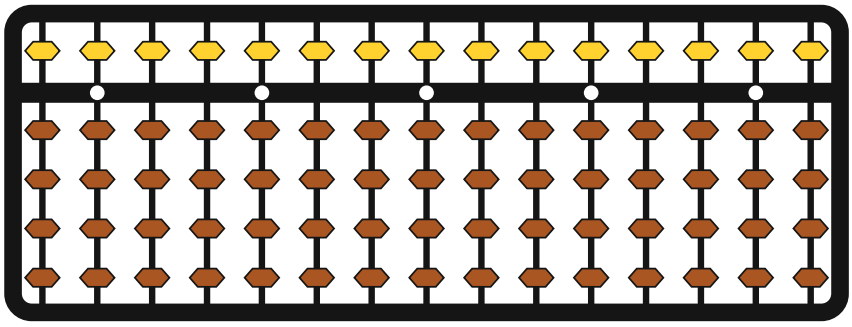
SHOW 506

Teacher ✓ ■

Read: _____

LESSON 5 • BUILD NUMBERS (5/3)

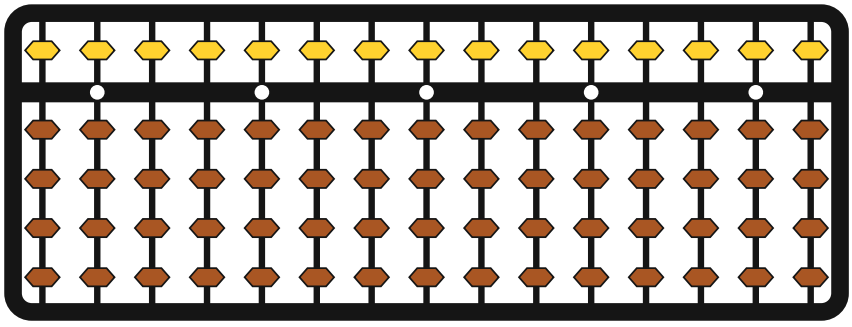
Copy each number onto the three middle rods; use all 15 rods as a guide



SHOW 720

Teacher ✓ ■

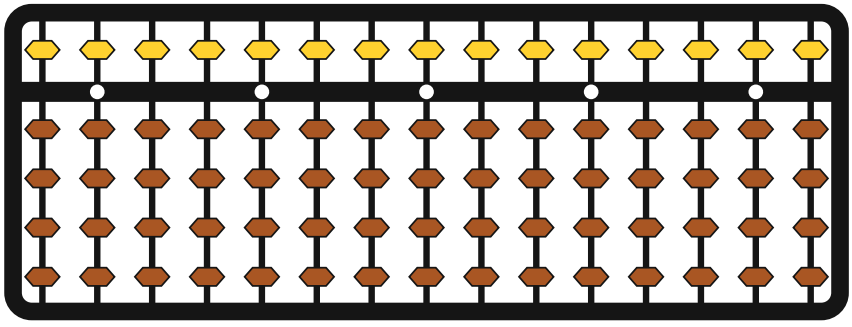
Read: _____



SHOW 849

Teacher ✓ ■

Read: _____



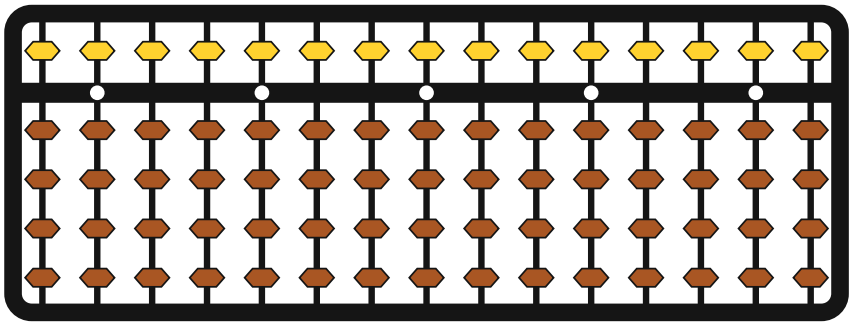
SHOW 999

Teacher ✓ ■

Read: _____

LESSON 5 • BUILD NUMBERS (6/3)

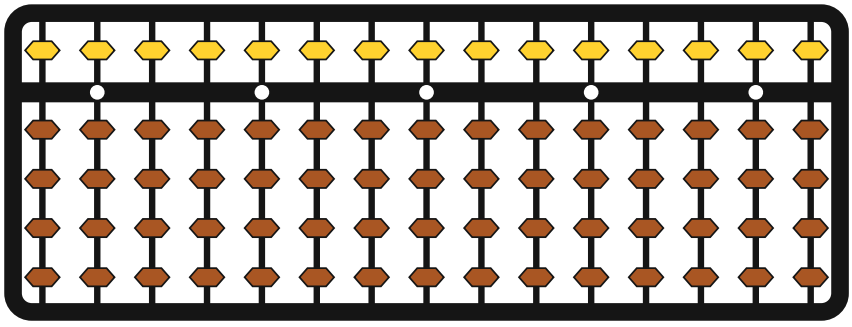
Copy each number onto the three middle rods; use all 15 rods as a guide



SHOW 608

Teacher ✓ ■

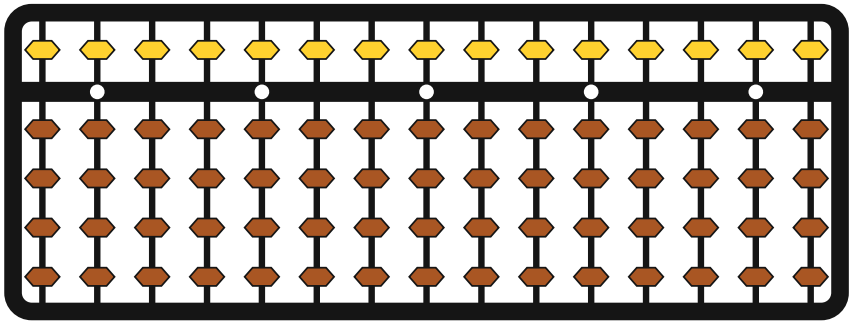
Read: _____



SHOW 127

Teacher ✓ ■

Read: _____



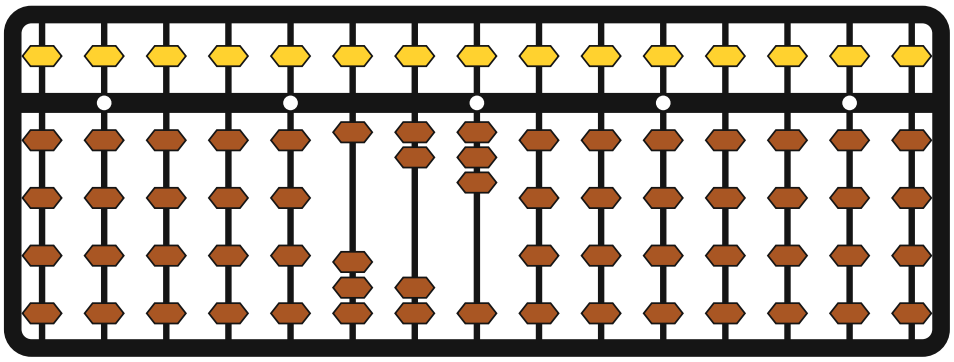
SHOW 405

Teacher ✓ ■

Read: _____

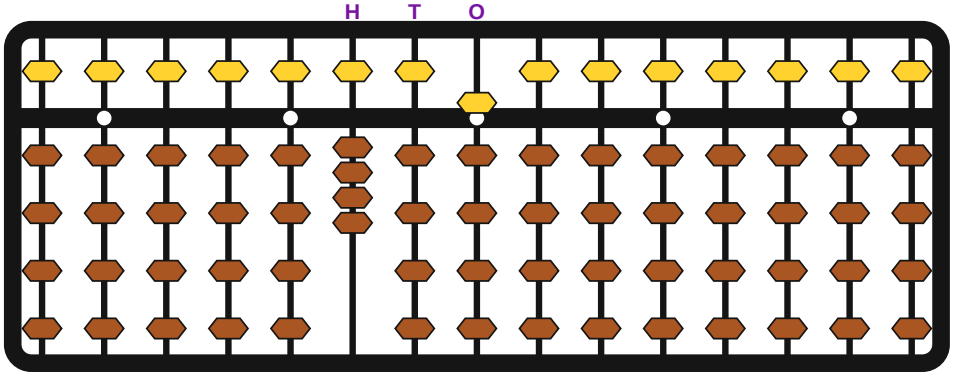
LESSON 6 • READ THE SOROBAN

Read the whole number across Hundreds, Tens and Ones



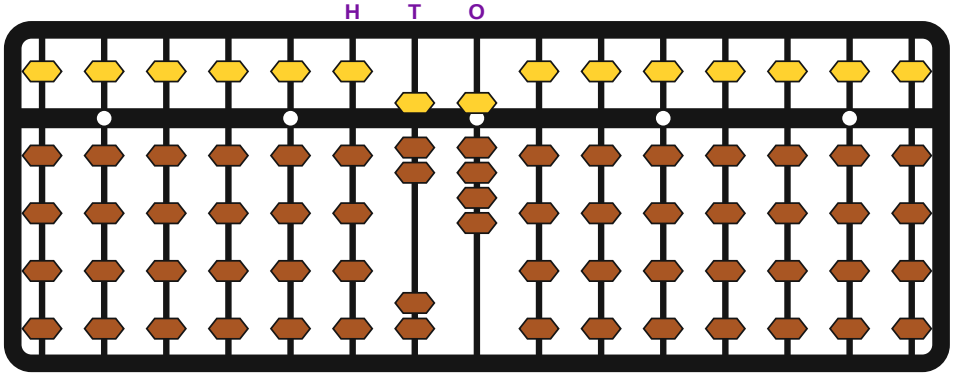
1. READ:

_____



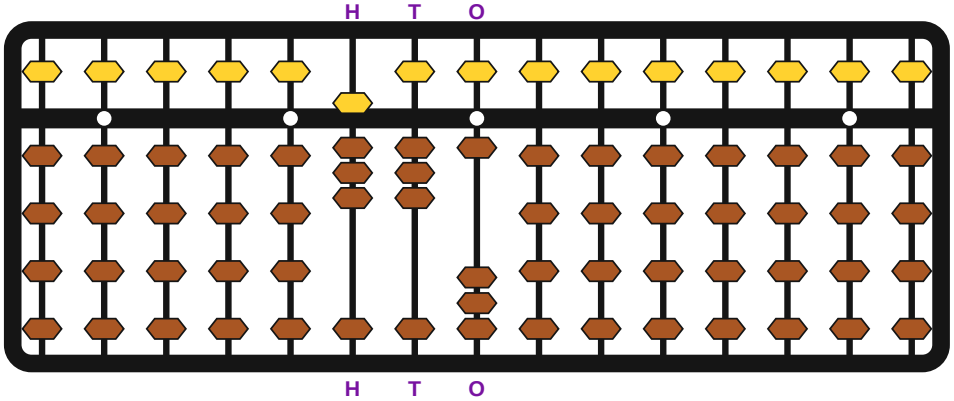
2. READ:

_____



3. READ:

_____



4. READ:

_____

LESSON 7 • DIRECT ADDITION

Move beads without carrying or exchanging complementary beads

Worked example: 1 + 2 = 3

Start with one lower bead against the centre bar on the Ones rod. Move two more lower beads towards the centre bar. Count three lower beads.

01. 1 + 2 = _____

02. 5 + 3 = _____

03. 6 + 2 = _____

04. 10 + 20 = _____

05. 21 + 12 = _____

06. 105 + 202 = _____

07. 30 + 10 = _____

08. 12 + 21 = _____

09. 300 + 100 = _____

10. 61 + 12 = _____

11. 123 + 211 = _____

12. 520 + 110 = _____

Method check: no bead exchange needed.

LESSON 8 • DIRECT SUBTRACTION

Move beads away from the bar without borrowing or bead exchange

Worked example: 4 – 2 = 2

Start with four lower beads against the centre bar on the Ones rod. Move two lower beads away from the bar. Two lower beads remain active.

01. 4 – 2 = _____

02. 9 – 3 = _____

03. 8 – 2 = _____

04. 74 – 21 = _____

05. 66 – 11 = _____

06. 347 – 125 = _____

07. 789 – 211 = _____

08. 903 – 101 = _____

09. 886 – 321 = _____

10. 478 – 212 = _____

11. 799 – 134 = _____

12. 978 – 422 = _____

Method check: no bead exchange needed.

Exchange a group of five for one upper bead

Friends of 5

1 + 4 = 5 **2 + 3 = 5**

Worked example: 2 + 3 = 5

Show 2 with two brown beads active on the Ones rod. There is room for only two more lower beads. To add 3: move the two active lower beads away (–2), then move the upper yellow bead down (+5).

The net change is –2 + 5 = +3.

Try the complements; describe what moves:

1. 1 + 4 = ___
2. 2 + 3 = ___
3. 3 + 2 = ___
4. 4 + 1 = ___
5. 5 – 4 = ___
6. 5 – 3 = ___
7. 5 – 2 = ___
8. 5 – 1 = ___

Say it aloud: “remove the complement, add five” (for addition).

FLUFFY FEET ACADEMY

ASSESSMENT • LEVEL 1 CHECK

20 questions | Number sense, place value, direct operations and friends of 5

01. Ones rod number = ____

02. Tens rod number = ____

03. Hundreds rod number = ____

04. Number of lower beads per rod = ____

05. Value of one upper bead = ____

06. 127 = ___H ___T ___O

07. 506 = ___H ___T ___O

08. 840 = ___H ___T ___O

09. 903 = ___H ___T ___O

10. 679 = ___H ___T ___O

11. 1 + 2 = ____

12. 5 + 3 = ____

13. 21 + 12 = ____

14. 105 + 202 = ____

15. 61 + 12 = ____

16. 9 – 3 = ____

17. 74 – 21 = ____

18. 347 – 125 = ____

19. 2 + 3 = ____ (friend of 5)

20. 5 – 2 = ____ (friend of 5)

Score: _____ / 20 **Teacher / Parent: _____**

ANSWER KEY • LEVEL 1

Teacher copy | Match bead movements as well as final numbers

Lessons 1–6

Lesson 1: upper beads; lower beads; centre bar; frame; Ones = 8; Tens = 7; Hundreds = 6.

Lesson 2: 0, 1, 2, 3, 4. Lesson 3: 5, 6, 7, 8, 9. Lesson 5: each diagram must show the requested digits on rods 6, 7 and 8.

Lesson 4: 123=1H2T3O; 405=4H0T5O; 682=6H8T2O; 709=7H0T9O; 931=9H3T1O; 250=2H5T0O; 806=8H0T6O; 570=5H7T0O; 194=1H9T4O; 999=9H9T9O.

Lesson 6: 123, 405, 79, 831

Lesson 7 • Direct addition

1. 3 • 2. 8 • 3. 8 • 4. 30 • 5. 33 • 6. 307 • 7. 40 • 8. 33 • 9. 400 • 10. 73 • 11. 334 • 12. 630

Lesson 8 • Direct subtraction

1. 2 • 2. 6 • 3. 6 • 4. 53 • 5. 55 • 6. 222 • 7. 578 • 8. 802 • 9. 565 • 10. 266 • 11. 665 • 12. 556

Lesson 9 • Friends of 5

1. 5 • 2. 5 • 3. 5 • 4. 5 • 5. 1 • 6. 2 • 7. 3 • 8. 4

Assessment

1. 8 • 2. 7 • 3. 6 • 4. 4 • 5. 5 • 6. 1H 2T 7O • 7. 5H 0T 6O • 8. 8H 4T 0O • 9. 9H 0T 3O • 10. 6H 7T 9O • 11. 3 • 12. 8 • 13. 33 • 14. 307 • 15. 73 • 16. 6 • 17. 53 • 18. 222 • 19. 5 • 20. 3

CERTIFICATE OF COMPLETION

Proudly presented to

_____

For completing the Fluffy Feet Academy Soroban Level 1 learning programme with effort, accuracy and care.

Date: _____ Teacher: _____