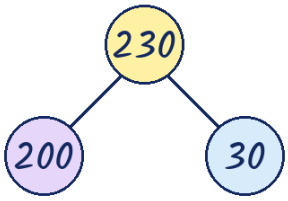
Place-Value Puzzle Lab

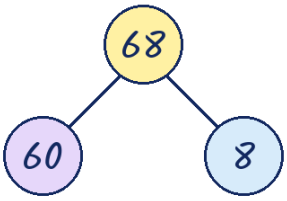
Split numbers into number bonds. Solve. Combine!

Name: _____ Date: _____

Watch: 230 + 68 = 298



+



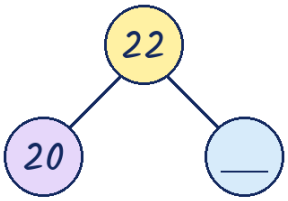
= 298

Match tens: 30 + 60 = 90. Keep 200 and 8.

Combine: 200 + 90 + 8 = 298.

Each whole equals the sum of its two connected parts.

A. Fill the missing parts: 22 + 5

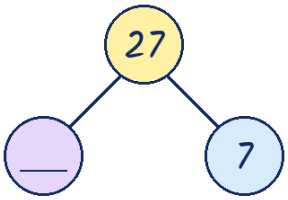


+ 5 = ____

Ones: 2 + 5 = ____

Combine: 20 + ____ = ____

B. Add the tens: 27 + 20



+ 20 = ____

Tens: 20 + 20 = ____

Combine: ____ + 7 = ____

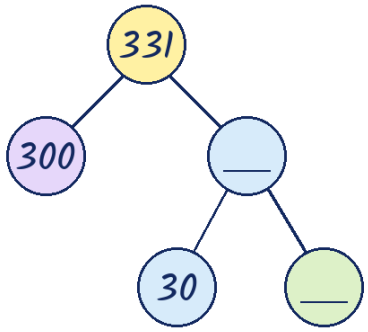
Trace a branch with your finger. Tell how the parts make the whole.

Build Bigger Number Bonds

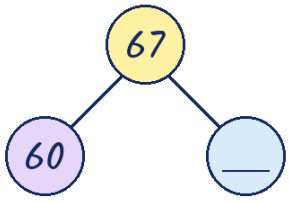
Fill the empty circles. Then add matching place values.

Name: _____ Date: _____

C. 331 + 67



+



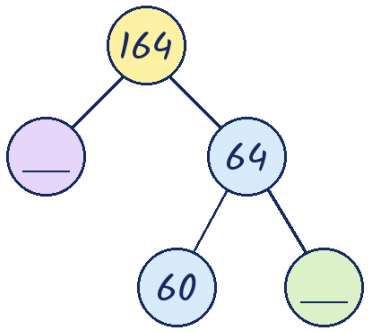
= ____

Tens: 30 + 60 = ____ Ones: 1 + 7 = ____

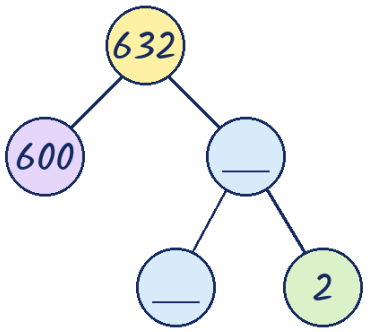
Combine: 300 + ____ + ____ = ____

Tip: Split 331 into 300 and 31. Then split 31 into 30 and 1.

D. 164 + 632



+



= ____

Hundreds: ____ + 600 = ____

Tens: 60 + ____ = ____ Ones: ____ + 2 = ____

Combine: ____ + ____ + ____ = ____

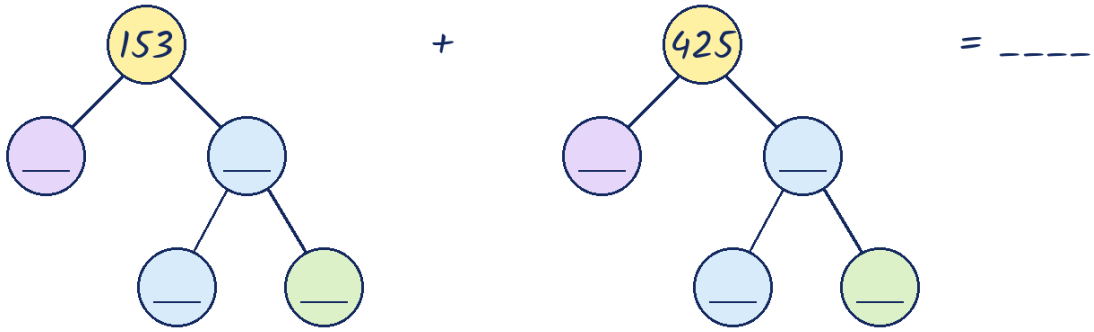
Draw a loop around the matching parts you added.

Addition: You Take the Lead

Finish the number bonds and show your thinking.

Name: _____ Date: _____

E. 153 + 425



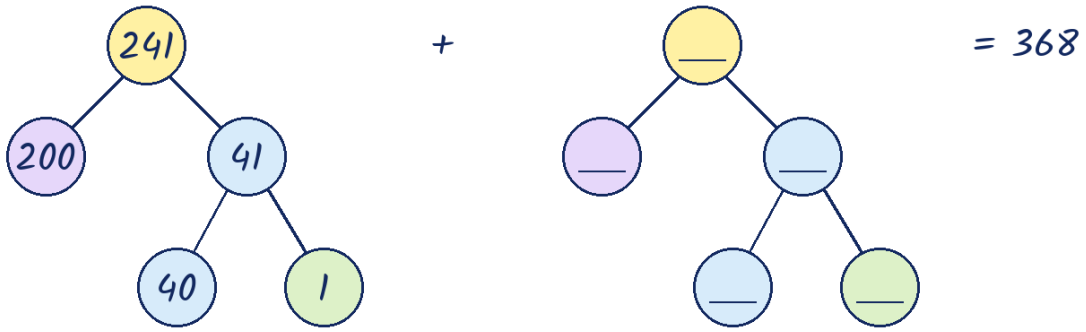
Split into hundreds and the rest, then tens and ones.

Add matching parts. Combine them for your answer.

_____

_____

F. Mystery number: 241 + ____ = 368



Write the missing whole and all its parts in the right bond.

The missing number has ____ hundred(s), ____ tens, ____ ones.

Explain how the matching parts add to 300 + 60 + 8.

_____

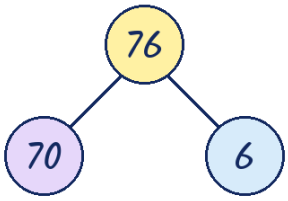
_____

Subtract with Number Bonds

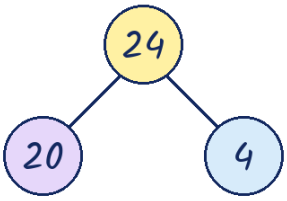
No regrouping needed in these problems.

Name: _____ Date: _____

Watch: 76 − 24 = 52



−



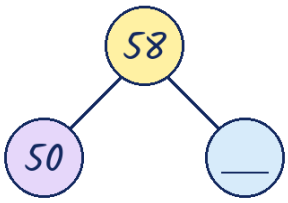
= 52

Ones: 6 − 4 = 2 Tens: 70 − 20 = 50

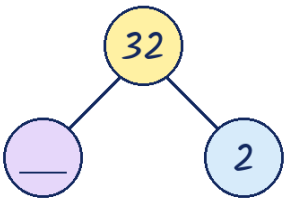
Combine the parts left: 50 + 2 = 52.

Check: 52 + 24 = 76.

6. Fill the missing parts: 58 − 32



−



= ____

Ones: ____ − 2 = ____

Tens: 50 − ____ = ____

Combine: ____ + ____ = ____

Check: ____ + 32 = 58

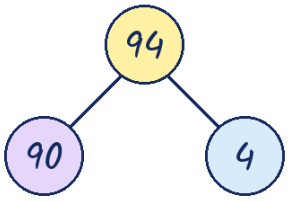
Subtract matching parts. ADD the parts left!

Subtract Like a Detective

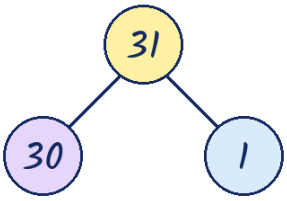
Use the bonds to spot errors and finish missing steps.

Name: _____ Date: _____

Find and fix: someone wrote 94 − 31 = 65



−



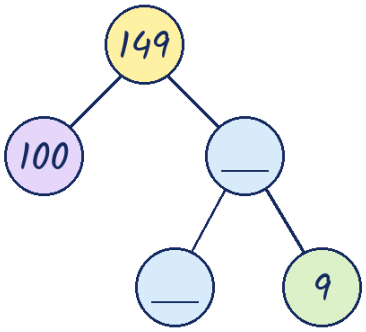
= ____

The work says 4 − 1 = 5. Is that true? Yes / No

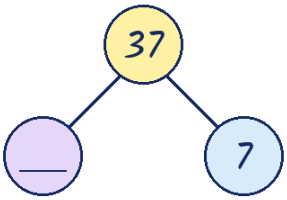
Fix the ones: 4 − 1 = ____ Tens: 90 − 30 = ____

Correct answer: ____ + ____ = ____

H. 149 − 37



−



= ____

Ones left: ____ Tens left: ____ Hundreds left: ____

Combine: ____ + ____ + ____ = ____

Addition check: _____

Why does the 100 part stay the same?

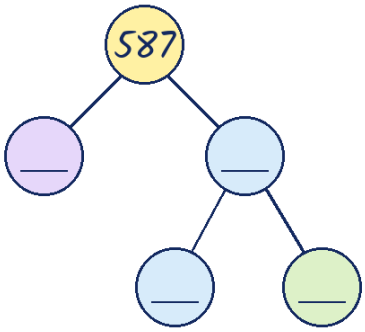
_____

The Final Puzzle Trail

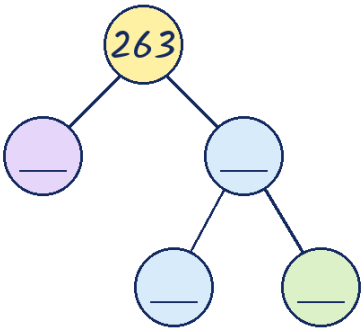
Complete each number bond. Show the parts you combine.

Name: _____ Date: _____

I. Solve on your own: 587 − 263



−



= ____

Subtract matching parts. Add the parts left.

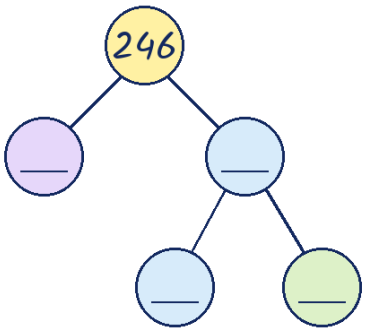
_____

_____

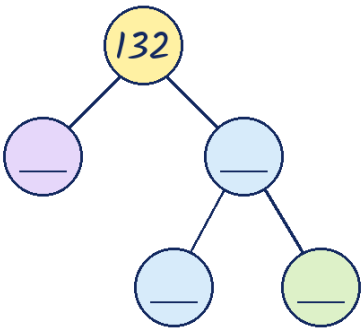
Addition check: _____

J. Sticker-shop mission

There are 246 star stickers and 132 moon stickers. How many stickers are there altogether?



+



= ____

_____

_____

Answer: _____ stickers

Circle: I can teach it! / I need one more try.

Answer Key + Teaching Notes

Keep this page separate from student copies.

Pages 1–3: addition. Pages 4–6: subtraction/mixed practice. Model, practise together, then fade help. All subtraction is without regrouping. Accept other valid decompositions.

Addition · pages 1–3

A. 22 = 20 + 2; 2 + 5 = 7; 20 + 7 = 27.

B. 27 = 20 + 7; 20 + 20 = 40; 40 + 7 = 47.

C. Bond: 331 → 300 + 31; 31 → 30 + 1; 67 → 60 + 7.

30 + 60 = 90; 1 + 7 = 8; 300 + 90 + 8 = 398.

D. Bonds: 164 → 100 + 64; 64 → 60 + 4.

632 → 600 + 32; 32 → 30 + 2.

100 + 600 = 700; 60 + 30 = 90; 4 + 2 = 6.

700 + 90 + 6 = 796.

E. Bonds: 153 → 100 + 53; 53 → 50 + 3.

425 → 400 + 25; 25 → 20 + 5.

500 + 70 + 8 = 578.

F. Bond: 127 → 100 + 27; 27 → 20 + 7.

1 hundred, 2 tens, 7 ones.

200 + 100 = 300; 40 + 20 = 60; 1 + 7 = 8.

Subtraction + mixed practice · pages 4–6

Detective: No. 4 − 1 = 3, not 5. 90 − 30 = 60.

Correct: 60 + 3 = 63.

G. 58 = 50 + 8; 32 = 30 + 2.

8 − 2 = 6; 50 − 30 = 20; 20 + 6 = 26.

Check: 26 + 32 = 58.

H. Bonds: 149 → 100 + 49; 49 → 40 + 9; 37 → 30 + 7.

Ones: 2; tens: 10; hundreds: 100. 100 + 10 + 2 = 112.

Check: 112 + 37 = 149. No hundreds are subtracted.

I. Bonds: 587 → 500 + 87; 87 → 80 + 7.

263 → 200 + 63; 63 → 60 + 3.

500 − 200 = 300; 80 − 60 = 20; 7 − 3 = 4.

300 + 20 + 4 = 324. Check: 324 + 263 = 587.

J. Bonds: 246 → 200 + 46; 46 → 40 + 6.

132 → 100 + 32; 32 → 30 + 2. Total: 378 stickers.

200 + 100 = 300; 40 + 30 = 70; 6 + 2 = 8.