

Grade 3 - Two-Step Word Problems and Patterns - Answer Key

Common Core 3.OA.D.8, 3.OA.D.9 · maths-pdf.fr/en/

This **two step problems answers** for 3rd Grade covers two-step word problems and patterns (Common Core 3.OA.D.8, 3.OA.D.9), with a free PDF to print.

Every solution shows the hidden first step, the second step, and the final equation with its letter. Use the key to check your work. If an answer is different, find the step where the numbers changed and try that step again.

Grade 3 · Common Core State Standards: **3.OA.D.8, 3.OA.D.9**

Two step problems answers: exercises 1 to 10

Exercise 1 - Groups, then add

First step: $4 \times 6 = 24$. Second step: $24 + 7 = 31$.

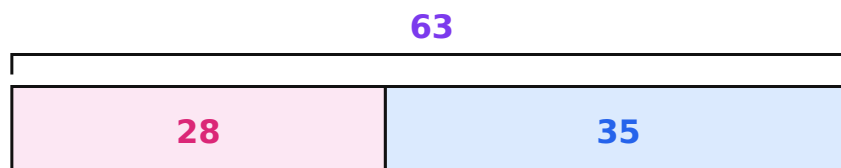
$4 \times 6 + 7 = p$, so **p = 31 pencils**.

Exercise 2 - Groups, then subtract

$5 \times 7 = 35$ and $35 - 9 = 26$.

$5 \times 7 - 9 = r$, so **r = 26 pumpkins**.

Exercise 3 - Add, then subtract



$28 + 35 = 63$ beads before using 19.

$28 + 35 = 63$, then $63 - 19 = 44$.

$28 + 35 - 19 = b$, so **b = 44 beads**.

Exercise 4 - Subtract twice

$90 - 36 = 54$, then $54 - 27 = 27$.

$90 - 36 - 27 = t$, so **t = 27 tickets**.

Exercise 5 - Share, then add

$24 \div 4 = 6$ stickers each, then $6 + 5 = 11$.

$24 \div 4 + 5 = s$, so **s = 11 stickers**.

Exercise 6 - Write the equation

Books on the shelves: $3 \times 9 = 27$. Then add 4: $27 + 4 = 31$.

Equation: $3 \times 9 + 4 = b$. **b = 31 books**.

Exercise 7 - Solve for the letter

$4 \times 8 = 32$, then $32 + 9 = 41$.

t = 41

Exercise 8 - Divide, then add

$35 \div 5 = 7$, then $7 + 8 = 15$.

q = 15

Exercise 9 - Multiply, then subtract

$6 \times 7 = 42$, then $42 - 15 = 27$.

w = 27

Exercise 10 - Parentheses first

Do the parentheses first: $6+4=10$. Then $10\times 3=30$.

$z = 30$

Exercises 11 and up

Exercise 11 - Estimate a sum

38 rounds to 40, 42 rounds to 40, and 19 rounds to 20.

Estimate: $40+40+20=100$. Exact: $38+42=80$ and $80+19=99$.

Estimate 100; exact sum 99.

Exercise 12 - Is it reasonable?

Estimate: 48 rounds to 50 and 37 rounds to 40, so $50+40=90$.

75 is far from 90, so it is **not reasonable**. The exact sum is $48+37=85$.

Exercise 13 - Estimate a product

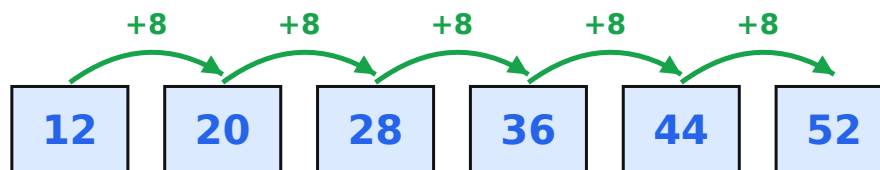
19 rounds to 20, so $4\times 20=80$.

Exact: $4\times 19=76$. The estimate is a little high because 19 is less than 20.

Estimate 80; exact 76.

Exercise 14 - Skip-counting pattern

Each number is 8 more than the one before: $20-12=8$.



The completed pattern.

Rule: **add 8**. Next numbers: **44 and 52**.

Exercise 15 - Pattern in a chart

The ones digits are 4, 8, 2, 6, 0, and then the same digits repeat. Every shaded number is **even**.

Counting by 4s adds an even number each time, and $\text{even} + \text{even} = \text{even}$.

Exercise 16 - Even or odd sums

$$7+9=16, 13+11=24, 21+5=26.$$

All three sums are even. The sum of two odd numbers is **always even**.

Exercise 17 - Multiples of 6

$$6, 12, 18, 24, 30, 36.$$

Since $6=2\times 3$, every multiple of 6 is a number of pairs. A number made of pairs is **even**.

Exercise 18 - Savings pattern

The totals go up by 4, so week 5 is $26+4=30$, or \$30.

After 8 weeks he added $8\times 4=32$ dollars. Then $10+32=42$.

$$10+8\times 4=t, \text{ so } t = \$42.$$

Exercise 19 - Farm stand

$$7\times 9=63, \text{ then } 63-26=37.$$

$$7\times 9-26=p, \text{ so } p = 37 \text{ peaches.}$$

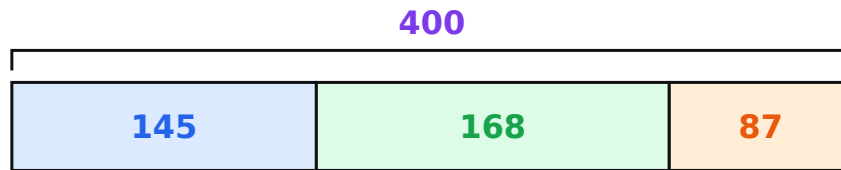
Exercise 20 - Bake sale

$$4\times 12=48 \text{ cookies, and } 48\div 6=8 \text{ bags.}$$

$$\text{Then } 8\times 3=24.$$

He earns **d = \$24**.

Exercise 21 - Road trip



The missing part is 87 miles.

$$145 + 168 = 313 \text{ miles so far.}$$

$$400 - 313 = 87.$$

$$400 - 145 - 168 = m, \text{ so } m = \mathbf{87 \text{ miles.}}$$

Exercise 22 - Team practice

$$36 \div 4 = 9, \text{ then } 9 + 2 = 11.$$

$$36 \div 4 + 2 = n, \text{ so } n = \mathbf{11 \text{ players.}}$$

Exercise 23 - Unknown at the start

Work backward. Undo the last step: $30 - 5 = 25$. Undo the first step: $25 + 8 = 33$.

$$\text{Check: } 33 - 8 + 5 = 30. \text{ } n = \mathbf{33 \text{ stickers.}}$$

Exercise 24 - Check with an estimate

$$\text{Estimate: } 3 \times 20 + 8 = 68.$$

$$\text{Exact: } 3 \times 19 = 57 \text{ and } 57 + 8 = 65.$$

Maya spent **\$65**, not \$75, so Maya is not correct.

Key facts behind this two step problems answers
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Key facts

- A two-step problem has a hidden question that is solved first.
- A letter such as m stands for the unknown number in an equation.
- Rounding to the nearest 10 gives a quick estimate to check an answer.
- An arithmetic pattern follows a rule such as add 7 each time.
- $\text{Odd} + \text{odd} = \text{even}$, $\text{even} + \text{even} = \text{even}$, $\text{even} + \text{odd} = \text{odd}$.

How to use this two step problems answers

Cover each solution, solve the exercise again, then uncover it and compare every line. If your answer differs, find the first step that changed and redo the exercise from there.

Download the two step problems answers as a PDF with the button below and keep it with your notes.

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