

Core Focus

- Subtraction: One-digit numbers from two-digit numbers (bridging tens)
- Subtraction: Count-on and count-back to subtract
- Subtraction: Two-digit numbers from three-digit numbers (bridging hundred)
- 2D shapes

Subtraction

- Students now use subtraction to compare two amounts (for example, “Marta has 12 pencils and Jeremy has 3. How many more pencils does Marta have than Jeremy?”).
- Answers to comparison subtraction problems can be solved by either counting on or counting back. The difference can be recorded in a subtraction equation ($12 - 3 = 9$), or an addition equation ($3 + 9 = 12$).

7.1 Subtraction: Reviewing two-digit numbers (hundred chart)

Step In Look at the counter on this number chart.

How would you move the counter to show a number that is 2 less?

How would you move the counter to show a number that is 10 less?

How would you move the counter to show a number that is 12 less?

11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60

I would start at 47 and subtract the tens then the ones. 47 take away 10 is 37. Then 2 less is 35.

I subtracted the ones first. 47 take away 2 is 45. Then 10 less is 35.

In this lesson, students count back the parts (tens and ones) to subtract two-digit numbers from two-digit numbers.

- Students also use a number line to show their thinking. For example, students see $67 - 23$ and *think* $67 - 20 - 3$, or $67 - 3 - 20$.

7.2 Subtraction: Reinforcing two-digit numbers (number line)

Step In How much will be left in the wallet after buying the cap?

How do you know?

Use this number line to show how you figured it out.

\$57 \$13

I started at 57 and counted back the tens then the ones of the price. I can draw jumps like this to show how I subtracted.

In this lesson, students count back the parts (tens and ones) on a number line.

Ideas for Home

- Counting back in tens or ones from any number is a key skill for subtraction. Take turns at naming a number between 51 and 99. Roll a standard number cube and count back that many tens or ones.
- Comparing the prices of similar items of food is a practical way to think about subtraction as comparison. Ask your child to find the difference between the prices of two similar items. Ask if they counted on or counted back, and to explain why.
- Knowing the combinations that make 10 (1 and 9, 2 and 8, 3 and 7, 4 and 6, 5 and 5) helps your child count on using a number line. Jumping to the next multiple of 10 is an efficient strategy. Ask, “How far from 63 to 70?” or “How far from 24 to 50?”

Helpful video

View these short one-minute videos to see these ideas in action.

www.bit.ly/OI_2

- When the number being subtracted is small (for example, $65 - 12$), it can be easier to count back. When the number being subtracted is large (for example, $78 - 65$), it can be easier to count on. Students may use the strategy that makes the most sense to them.
- Students make jumps of different amounts on the number line while solving problems. They also decide whether to first subtract the ones or the tens, depending on the numbers involved.

7.8 Subtraction: Solving word problems

Step In This poster shows the cost of tickets to a concert. Some seats are closer to the stage, so they cost more.

What is the difference in cost between the Gold and General tickets? How do you know?
Two friends share their strategies.

Lifen uses a number line.

Jayden uses a written method. He subtracts the tens then the ones.

$$\begin{array}{r} 72 - 30 = 42 \\ 42 - 4 = 38 \end{array}$$

What is similar about the two strategies?
What steps does Jayden follow?

Use Jayden's strategy to figure out the difference in cost between the Gold and Silver tickets.

I would count on to figure out the difference.

$$\begin{array}{r} 55 + 15 = 70 \\ 70 + 2 = 72 \\ 15 + 2 = 17 \end{array}$$

Concert

Gold	\$72
Silver	\$55
General	\$34

In this lesson, students choose and use a place-value strategy to subtract two-digit numbers.

2D shapes

- Students learn that polygons are **closed shapes** with sides that are all straight. They also learn that polygons have the same number of vertices (corners) as they have sides; for example, a quadrilateral has four sides and four vertices.
- The sides and corners of a polygon do not have to be identical. An octagon can have all sides the same length (think of a stop sign) or different lengths.

7.10 2D shapes: Identifying quadrilaterals

Step In Look at these shapes. What is the same about them?
What is different?

Which of the shapes are polygons?
How do you know?
Polygons that have exactly four sides are called **quadrilaterals**.

The **quad** part of the word quadrilateral means **four**. The **lateral** part means **side**.

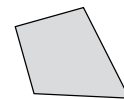
In this lesson, students identify quadrilaterals as polygons that have exactly four sides.

Ideas for Home

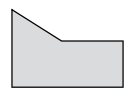
- Children can easily count on or count back by ones, or use a known fact, to subtract when they do not need to bridge a multiple of ten (e.g. $68 - 5$). However, counting past a multiple of ten can be difficult. Name any two-digit number with the ones place less than 5 and have your child subtract 7, 8, or 9 (e.g. "What is 73 take away 8?") Listen as your child explains how they solved the problem.
- Ask your child to look for shapes in the home and environment. Doors and windows are often rectangles, but look for other shapes, such as triangles, and shapes with more than 4 sides, such as hexagons and pentagons.
- Take turns at giving directions to draw shapes by naming the number of sides and corners, and whether the sides are the same length or have different lengths. E.g. say, "Draw a shape with five sides and five corners with different side lengths."

Glossary

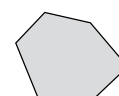
- These are examples of some of the **closed shapes** that are taught in this lesson.



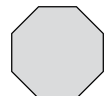
quadrilateral



pentagon



hexagon



octagon