



GRADE 3 · FREE TUTORIAL

Slides, Flips & Turns

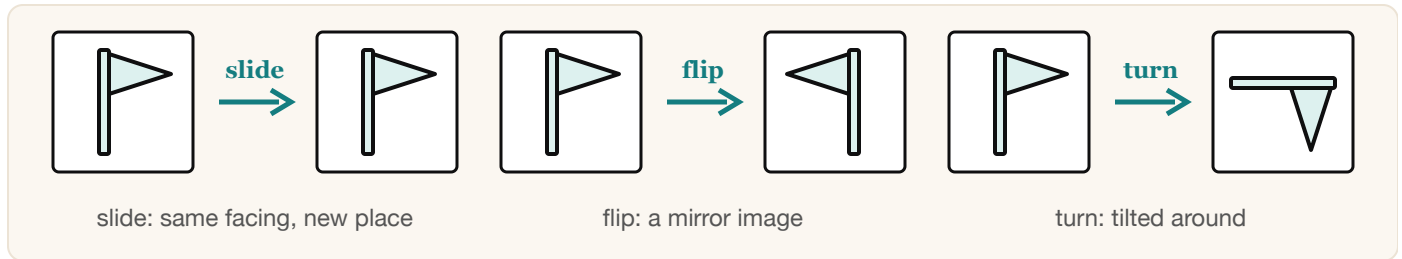
A gentle walkthrough & a 22-question exam

Part 1 walks through slides, flips, and turns from the very beginning, with drawings. Part 2 is a 22-question exam that starts easy and slowly builds to harder, ISEE-style reasoning questions. Work through the lesson together first, then let your child try the exam. The answer key at the back explains every question.

1 · Moving a shape

A shape can move in three ways: it can **slide**, **flip**, or **turn**. After any of these moves it is still the same shape and the same size. Only its place or the way it faces has changed.

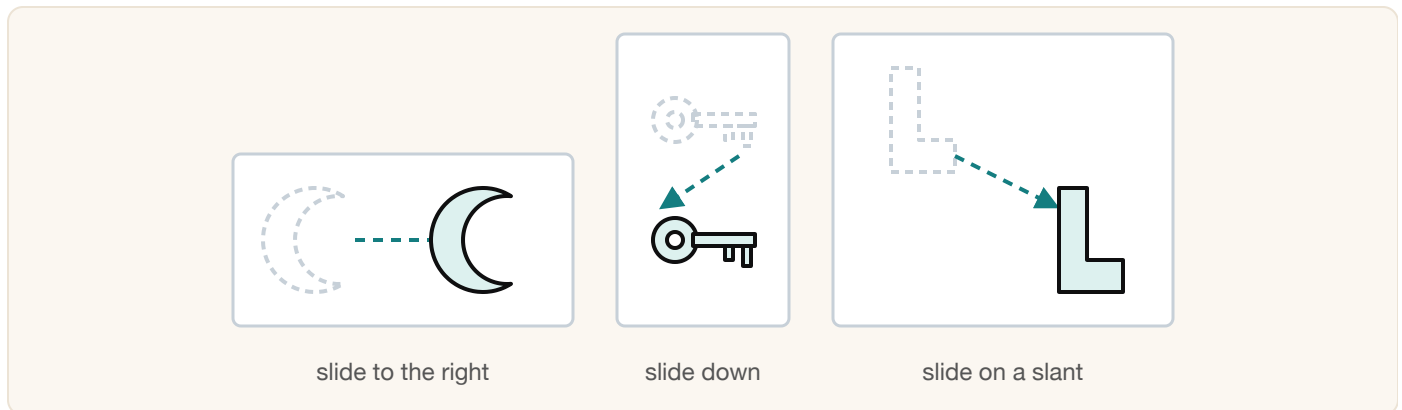
Think of a sticker. You can push it across the page, peel it off and put it on backwards, or spin it. It is the same sticker every time.



2 · Slide

A **slide** pushes the shape along a straight line: right, left, up, down, or on a slant. The shape does not spin and does not get mirrored. It **faces the same way** before and after.

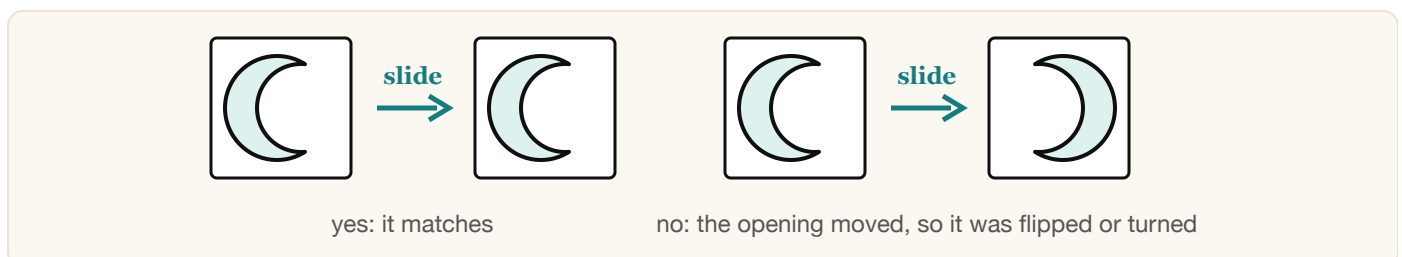
So after a slide, the shape looks **exactly the same**. Only its spot is different.



3 · The slide check

Test questions love to ask, "Which picture shows the sticker after it slides?" Then they show a mirror image next to the real answer, hoping you pick it.

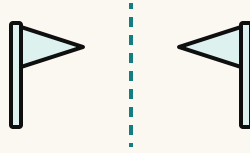
Here is the check: after a slide, the picture must **match the start exactly**. If the opening, the point, or the foot faces a different way, that was a flip or a turn, so it was never a slide.



4 • Flip

A **flip** turns the shape over a line, like folding the paper along a crease. The result is a **mirror image**: whatever pointed left now points right.

The dashed line is the fold line. Each point of the shape lands the same distance from the line on the other side.

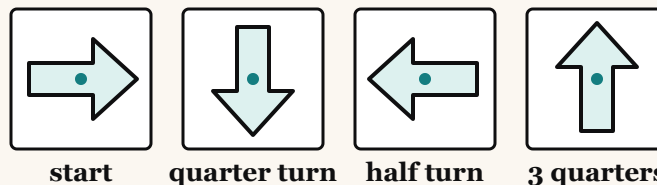


flip over an up-and-down line: left and right swap

5 • Turn

A **turn** spins the shape around a point, like the hand of a clock around its center. A **quarter turn** is one corner of a square, like a clock hand going from 12 to 3. A **half turn** is two quarter turns: the shape ends up upside down. A **three-quarter turn** is three, and four quarter turns bring it all the way back to the start.

After a turn, nothing is mirrored. The shape is just tilted.

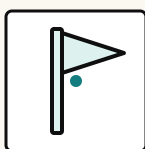


each picture is one quarter turn clockwise from the one before

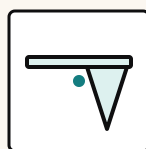
6 • Which way? Clockwise and counterclockwise

Clockwise is the way clock hands go: top, right, bottom, left. **Counterclockwise** is the opposite way.

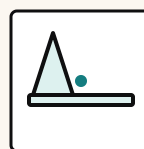
A quarter turn clockwise and a quarter turn counterclockwise give **different** pictures. A half turn is the same picture either way, because both ways land upside down.



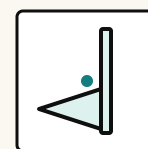
start



quarter turn clockwise



quarter turn counterclockwise

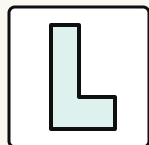


half turn, either way

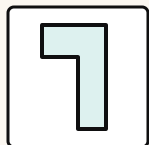
7 • Flip or half turn?

These two get mixed up the most. Both change where the shape points, so look at the **whole** shape. After a **half turn** the shape is upside down: what was on top is now on the bottom **and** what was on the left is now on the right. After a **flip** only one of those swaps.

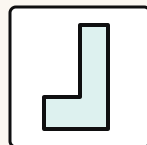
Trace it with your finger: spin the paper half way around (turn), or fold it over (flip). They do not land in the same place.



start: foot at bottom right



half turn: foot at top left

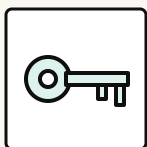
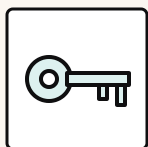


flip: foot at bottom left

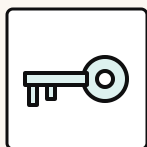
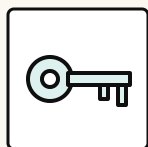
8 • Naming the move

Given a before and an after, ask two questions. **Does it face the same way?** If yes, it was a slide. **Is it a mirror image?** If yes, it was a flip. Otherwise it is tilted, so it was a turn.

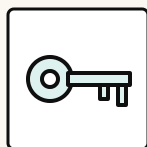
Then say how much: a quarter turn puts it on its side, a half turn puts it upside down.



same facing: slide



mirror image: flip



on its side: quarter turn

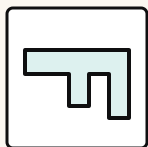
9 • What a move never changes

A slide, a flip, or a turn never makes a shape **bigger, smaller, or stretched**. It never adds or takes away a side. If the "after" picture is a different size or a different shape, then it is not one of the three moves at all.

That is why the moved shape is always **congruent** to the start: same size and same shape, just placed differently.



start



a move: same size

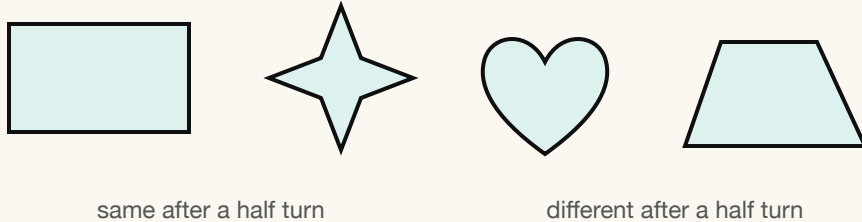


not a move: it shrank

10 • Shapes that look the same after a turn

Some shapes look exactly the same after a half turn. A rectangle, a square, and a four-point star all do: turn them upside down and nothing seems to change. A heart or a trapezoid does not; upside down it looks different.

A square even looks the same after a quarter turn. Questions like "Which shape looks the same turned upside down?" are asking exactly this.



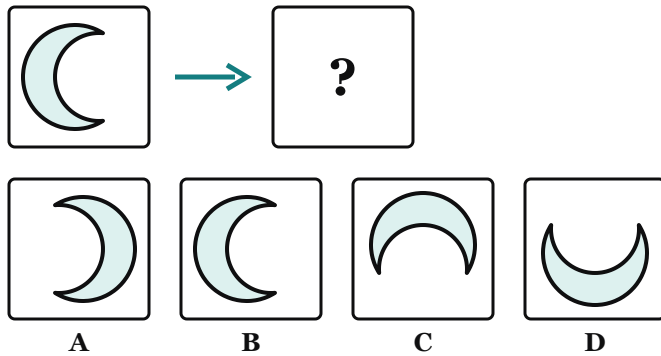
11 • Test tips

Read the move word first. **Slide:** pick the picture that matches the start exactly. **Flip:** pick the mirror image. **Turn:** pick the tilted one, and count the quarters (a quarter turn is on its side, a half turn is upside down).

Cross off any choice that is a different size or shape. Then check the one that is left by tracing the move with your finger. You are ready for the test! 🎉

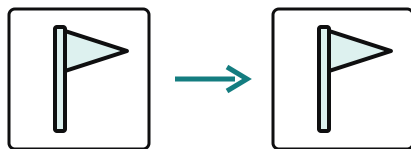
Read each drawing first, then choose the best answer. Take your time, there is no clock here. Questions start gentle and get harder toward the end. Circle your answer.

- 1 Mia slides her moon sticker to the next page. Which shows the sticker after the slide?



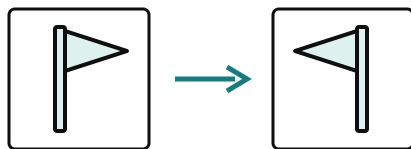
- A A B B
C C D D

- 2 The flag moved from the first box to the second. It faces the same way. Which move was it?



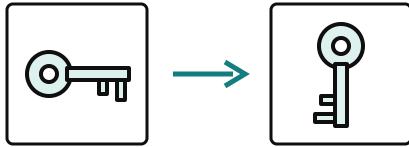
- A flip B turn
C none of these D slide

- 3 Which move turned the first flag into the second flag?



- A flip B slide
C turn D none of these

4 Which move turned the first key into the second key?



A slide

B flip

C turn

D none of these

5 Which move makes a mirror image of a shape?

A slide

B flip

C turn

D shrink

6 How many quarter turns does it take to go all the way around, back to the start?

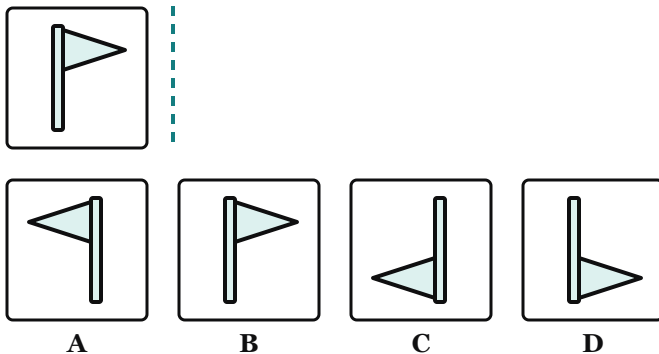
A 2

B 3

C 8

D 4

7 Which shows the flag after a flip over the dashed line?



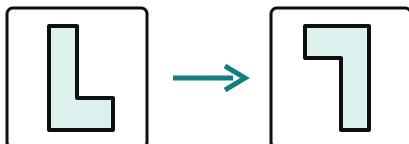
A A

B B

C C

D D

8 Which move turned the first shape into the second shape?



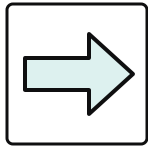
A a slide

B a flip

C a quarter turn

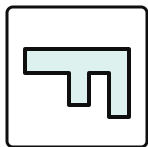
D a half turn

- 9 The arrow points right. After a half turn, which way will it point?

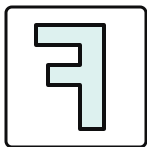


- A up
B left
C down
D right

- 10 Which picture does NOT show a slide, a flip, or a turn of the first shape?



A



B



C



D

- A A
B B
C C
D D

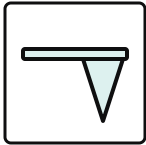
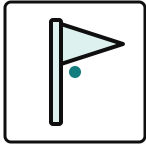
- 11 Two quarter turns in the same direction make what?

- A a half turn
B a slide
C a flip
D a whole turn

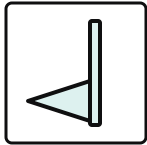
- 12 After a slide, what is different about the shape?

- A only its place
B the way it faces
C its size
D its number of sides

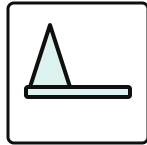
- 13 Which shows the flag after a quarter turn counterclockwise?



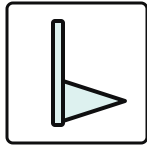
A



B



C



D

A A

B B

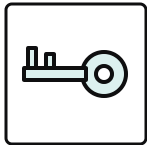
C C

D D

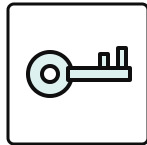
- 14 Which shows the key after a half turn?



A



B



C



D

A A

B B

C C

D D

- 15 Sam flips a sticker over a line. Then he flips it back over the same line. How does the sticker look now?

A upside down

B a mirror image of the start

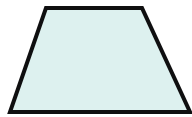
C on its side

D exactly the way it started

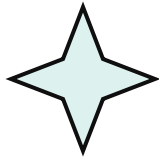
- 16 Which shape looks exactly the same after a half turn?



A



B



C



D

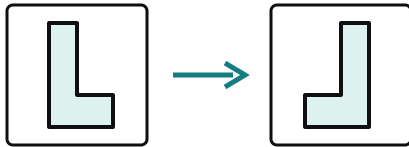
A A

C C

B B

D D

- 17 Ana says the second shape is a half turn of the first. Ben says it is a flip. Who is right?



A Ben, because only left and right swapped

B Ana, because the foot moved

C Both, because a flip and a half turn are the same

D Neither, because the shape changed size

- 18 A shape makes three quarter turns clockwise. Which single turn lands in the same place?

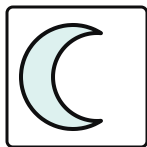
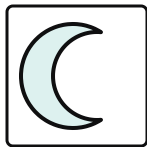
A one quarter turn clockwise

B a half turn

C a whole turn

D one quarter turn counterclockwise

- 19 The moon slides to a new page, then flips over an up-and-down line. Which shows the moon at the end?



A



B



C



D

A A

C C

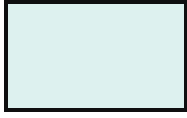
B B

D D

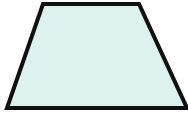
20 Which statement is true about a shape after a flip?

- A It faces the same way as before.
 - B It is smaller than before.
 - C It is the same size as before.
 - D It has more sides than before.
-

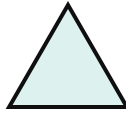
21 Which shape looks the same after a quarter turn?



A



B



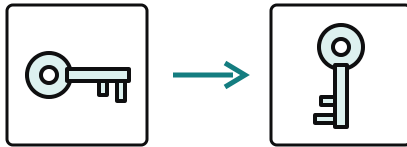
C



D

- A A
 - B B
 - C C
 - D D
-

22 The key was moved as shown. Which two moves, one after the other, could ALSO land it here?



- A a flip, then a flip over the same line
 - B a slide, then a slide
 - C a half turn, then a quarter turn counterclockwise
 - D a half turn, then a half turn
-

ANSWER KEY & EXPLANATIONS

- 1 B** A slide moves the sticker without spinning or mirroring it, so it looks exactly the same. The opening still faces right.
 - 2 D** Only a slide leaves the shape facing exactly the same way.
 - 3 A** The second flag is a mirror image: the pennant now points left. That is a flip.
 - 4 C** The key is on its side, tilted a quarter of the way around. That is a turn.
 - 5 B** A flip folds the shape over a line, so the result is its mirror image.
 - 6 D** Four quarters make a whole, so it takes 4 quarter turns to bring the shape back to where it began.
 - 7 A** Folding over an up-and-down line swaps left and right. The pennant now points left and the pole is on the right.
 - 8 D** The shape is upside down: top and bottom swapped and left and right swapped. That is a half turn.
 - 9 B** A half turn spins the arrow all the way to the opposite side, so it points left.
 - 10 C** That shape got smaller. A slide, flip, or turn never changes the size.
 - 11 A** A quarter plus a quarter is a half. Two quarter turns leave the shape upside down.
 - 12 A** A slide moves the shape to a new spot. Everything else stays the same.
 - 13 C** Counterclockwise is the opposite of clock hands. The top of the pole swings to the left, so the flag lies with its pennant pointing up.
 - 14 B** Upside down means both swaps: the round head is on the right AND the teeth point up. A flip does only one of those.
 - 15 D** The second flip undoes the first. Two flips over the same line bring the shape back to the start.
 - 16 C** Turn the four-point star upside down and it looks just the same. The heart, the trapezoid, and the flag all look different upside down.
 - 17 A** The foot is still at the bottom, so top and bottom did not swap. Only left and right did. That is a flip. A half turn would put the foot at the top.
 - 18 D** Three quarters forward is the same spot as one quarter backward: four quarters make a whole.
 - 19 B** The slide changes nothing about how it looks. The flip swaps left and right, so the opening now faces left.
 - 20 C** A flip mirrors the shape, so it faces a different way, but the size and the number of sides never change.
 - 21 D** A square has four equal sides and four square corners, so a quarter turn lands it right on itself. A rectangle only matches after a half turn.
 - 22 C** The key is a quarter turn clockwise from the start. A half turn (two quarters) then one quarter back is one quarter clockwise in all. The other pairs land back at the start.
-

