

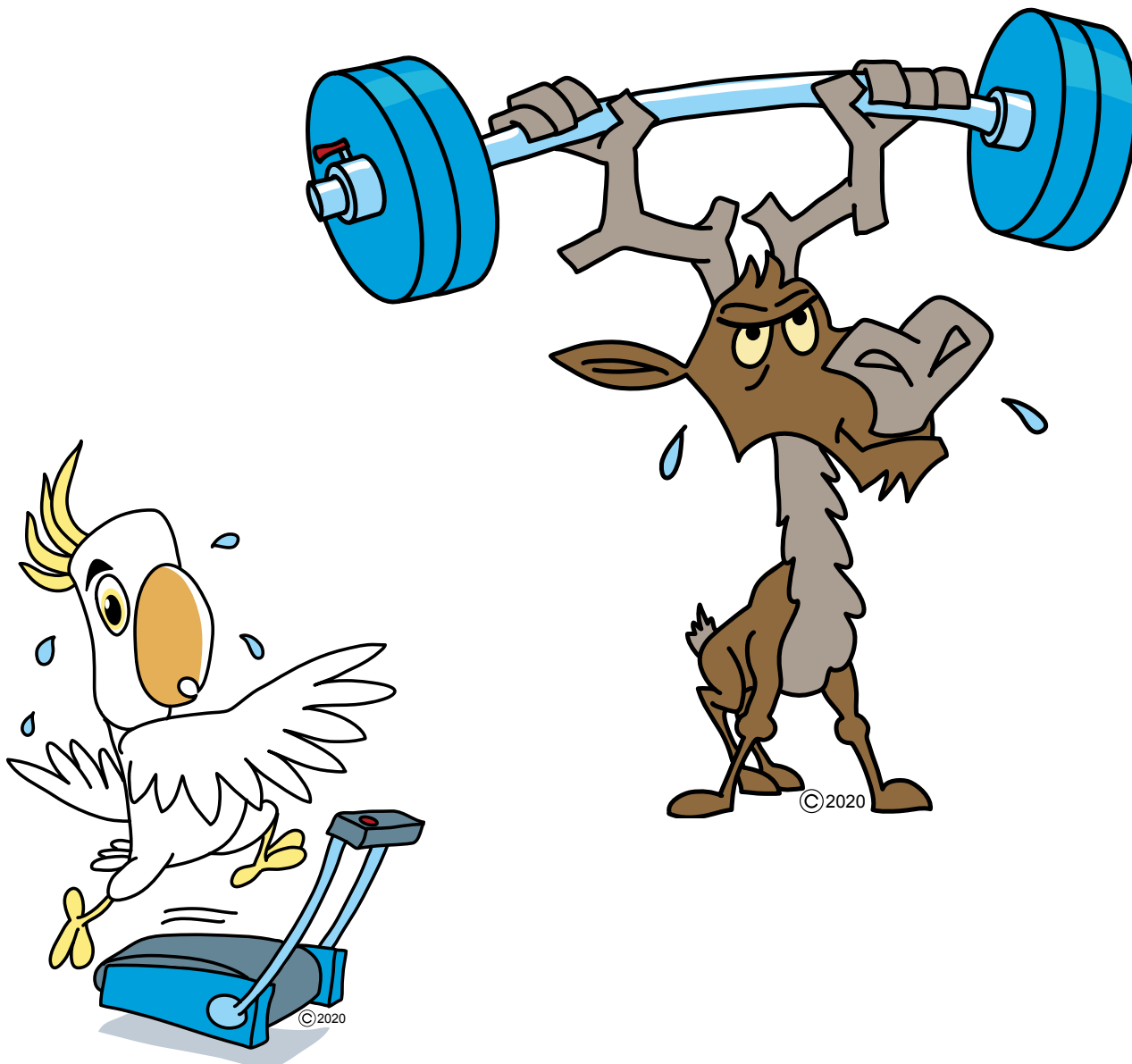


Colin and Coco's Deliberate Practice

Year 5 Unit 8

Geometry: Properties of Shapes

Answers





Contents

This pack of deliberate practice is designed to be used flexibly to secure the manageable steps of this unit.

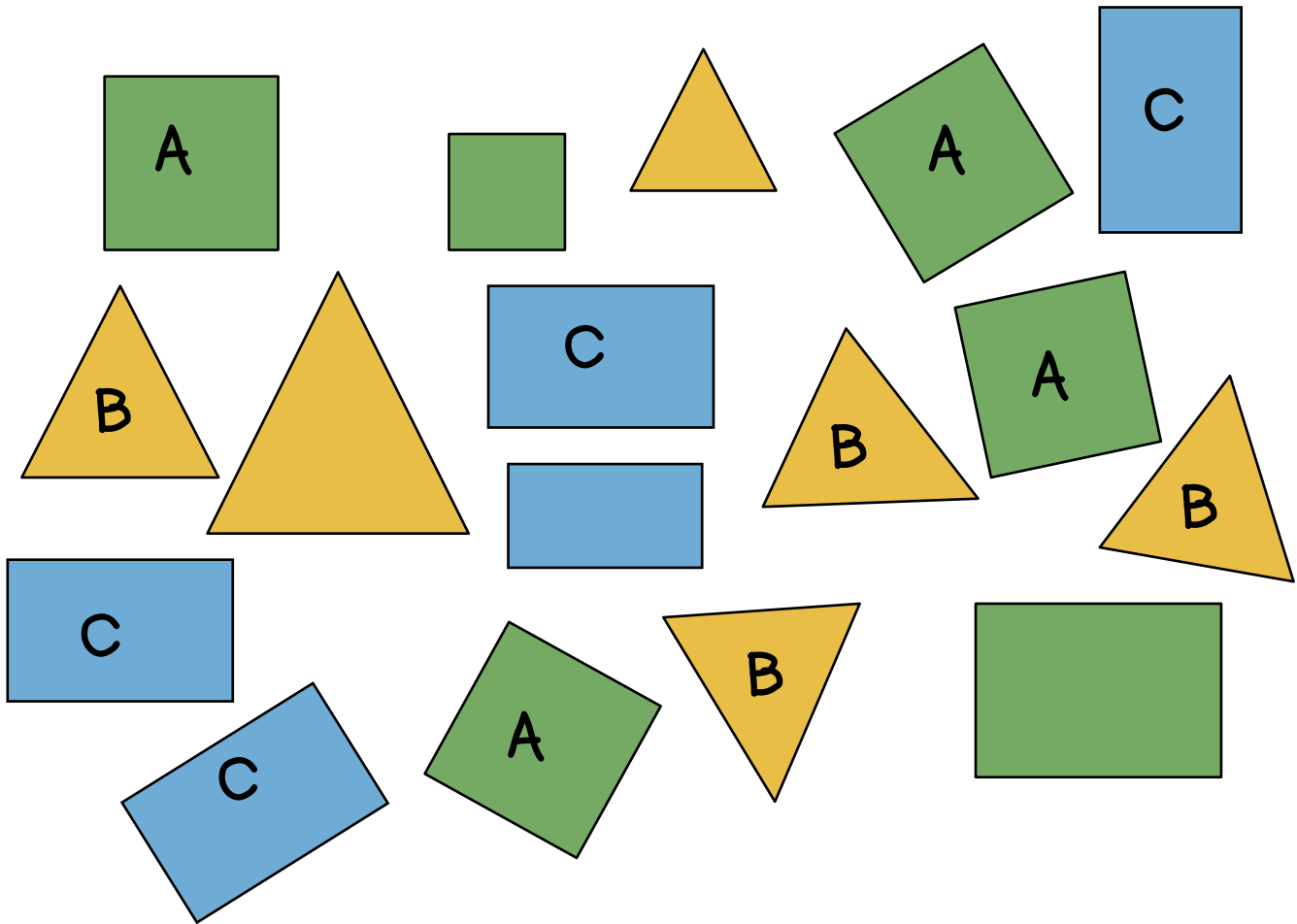
The table below indicates which activities are linked to which manageable steps.

	Do It	Challenge It	Play It
Know what congruence means	1		
Carry out a translation described using mathematical language		1	1
Carry out a reflection using a line parallel to the axes including touching the object	2	2	
Carry out a reflection using a line parallel to the axes and crossing the object		2	
Describe a reflection	2		



Do It 1

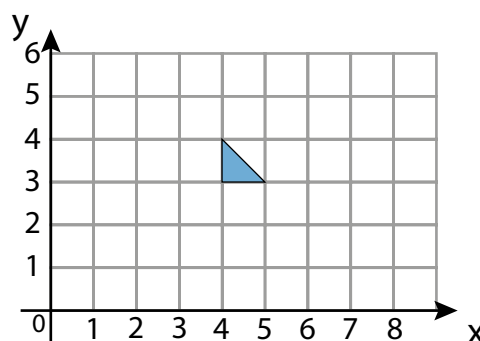
Label shapes that are congruent to A, B or C



Challenge It 1

The triangle has made a horizontal move of 3 and a vertical move of 2
List the coordinates of the possible starting places for the triangle.

Possible solution
(1,6) (2, 5) (1, 5)



How would the starting coordinates change if the triangle had made a horizontal move of 2 and a vertical move of 1?



Translation Game

Play It 1

You need:

1 - 6 dice

A counter each

Translation Game Board (below)

To play:

Start with your counter on one of the shaded circles. Players take it in turns to throw the dice twice.

A throw of 1 or 4 means you can move one square.

A throw of 2 or 5 means you can move two squares.

A throw of 3 or 6 means you can move three squares.

Decide which move to use as the horizontal move and which to use as the vertical move. If you finish on a number, that is your score.

For example:

Player 1 throws 4 and 2 and chooses to move up 2 squares and 1 square to the left. They finish on a 1 so score 1 point.

To win:

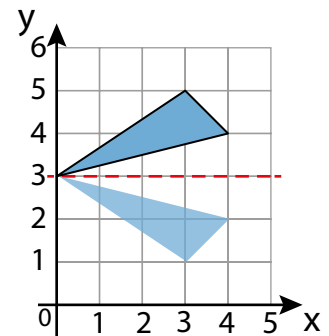
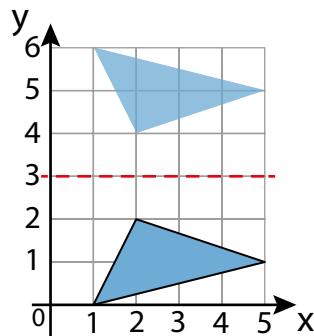
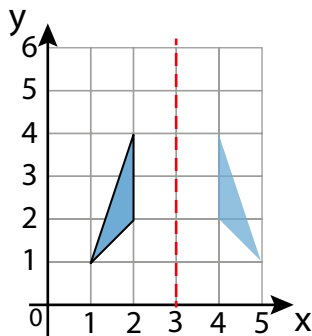
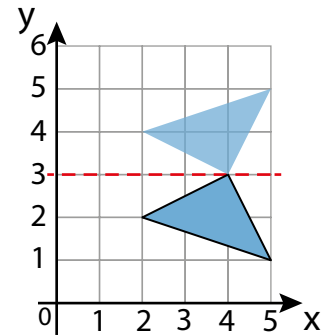
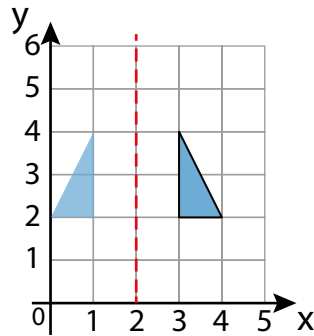
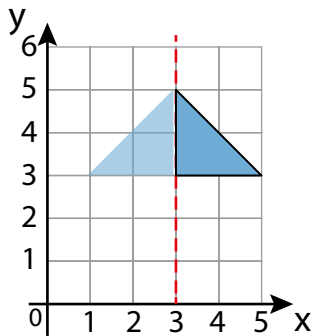
The winner is the first player to score 15 points or more.

3		3			2				1
		1					3		
	3		2	3		2			2
			●			●		3	
2		3		2			2		1
	2		●		3	●			
3		2		2		1		3	2
			3						
	1				2	3		2	



Reflect the shape in the mirror line.

Do It 2

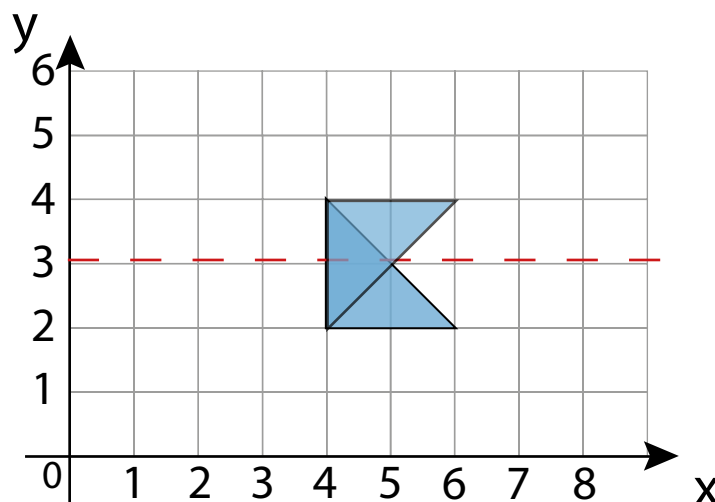


Describe the reflection each time.

Challenge It 2

Draw a horizontal mirror line and reflect the triangle so it stays within the grid.
Draw another horizontal mirror line and reflect again. And again!

Reflect the triangle in as many different vertical mirror lines as you can.



one example



Reflection Game

Play It 2

You need:

The Reflection Grid

To play: (This is a collaborative activity.)

Find as many ways as you can of reflecting a shape onto another shape by drawing a mirror line. Some shapes have more than one possible image.

Are there any shapes that do not have an image?

Draw an image for each of those shapes.

