

Dear All

I hope this letter finds you all safe and well.

This pack of learning is based around direction and movement.

I hope you all find some fun activities amongst this work pack.

Peak with you all soon.

Mrs Holman

Here are some sites that you can visit.

<https://mathszone.co.uk/category/shape/direction-movement-logo/>

<https://www.smartboardingschool.com/position-and-direction-4---5>

<https://www.topmarks.co.uk/maths-games/7-11-years/shape-position-and-movement>

<https://www.bbc.co.uk/bitesize/clips/z7kwmp3>

<https://nrich.maths.org/9023>

<https://www.bbc.co.uk/sport/av/super movers/42626760>

Can you give directions to an adult in your home to get from one room to another?

How about writing directions to get from your home to your local shop?

Draw your own treasure map and ask someone to tell you where each item is on it?

# Find the Pattern

Continue these patterns.



Rosie creates a pattern with coloured beads. Can you draw her pattern on the bead string? It goes yellow, yellow, blue, yellow, yellow, blue...



What colour will the 12th bead be? \_\_\_\_\_

What colour will the 20th bead be? \_\_\_\_\_

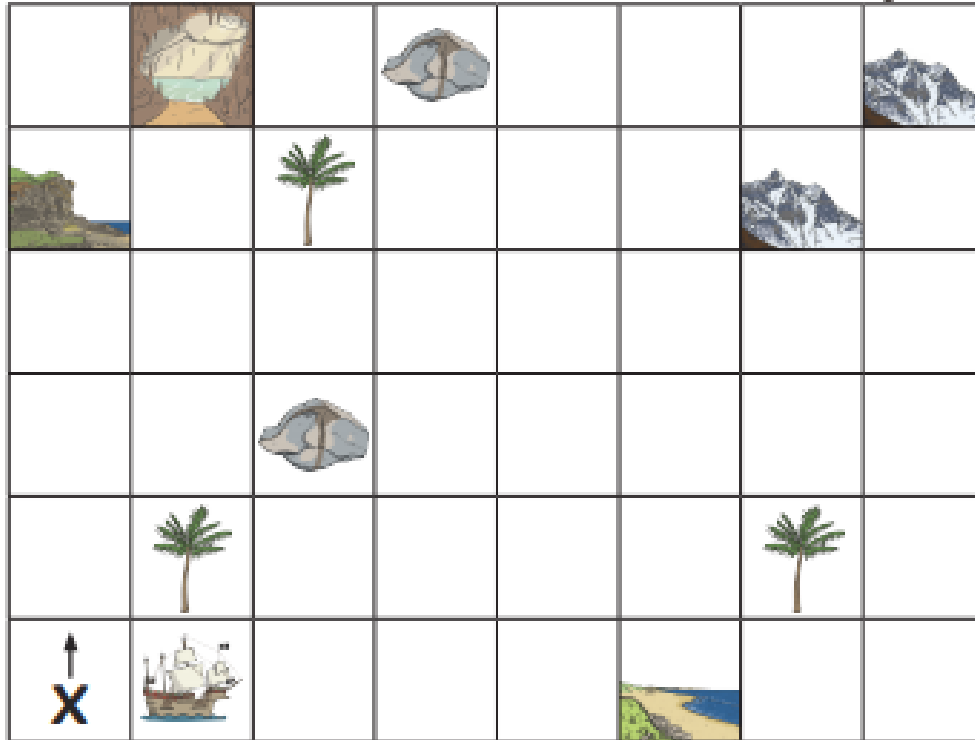
Rosie decides to put a green bead between each of the two yellow beads in her pattern. What does her bead string look like now?



What colour will the 12th and 20th beads be now? \_\_\_\_\_

# Treasure Map

Help Pirate Pete find his way to the buried treasure, by following the instructions on the map.



Start at X.

Move 2 squares forward. Rotate clockwise.

Move 1 square forward. Rotate anti-clockwise.

Move 1 square forward. Rotate clockwise.

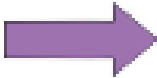










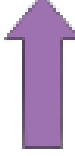



Move 3 squares forward. Rotate anti-clockwise.

Move 2 squares forward. Rotate clockwise.

Move 2 squares forward. Draw the treasure on the map!











# Rotating Arrows

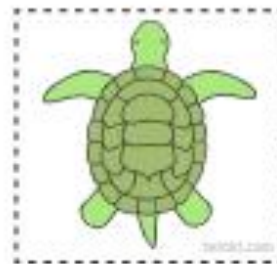
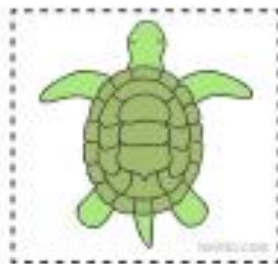
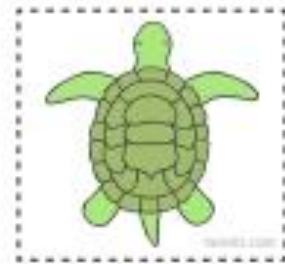
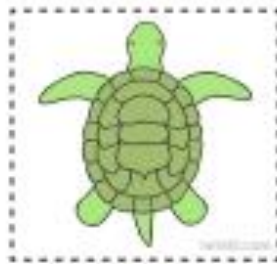
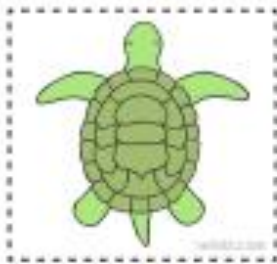
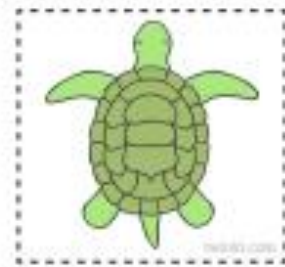
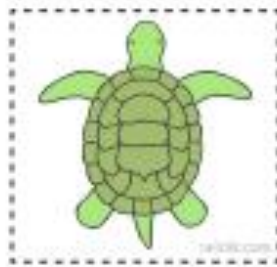
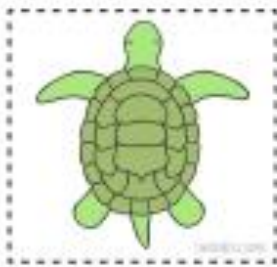
Start with...	Do this...	It will look like this:
	 quarter turn clockwise	
	 half turn anti-clockwise	
	 full turn clockwise	
	 quarter turn anti-clockwise	
	 half turn clockwise	
	 three quarter turn anti-clockwise	
	 three quarter turn clockwise	

# Turtle Turns Activity

I can make clockwise and anticlockwise turns.

In pairs, take it in turns to roll a dice. The first to turn all their turtles correctly is the winner.

<b>A half turn clockwise</b>	<b>A quarter turn clockwise</b>	<b>A whole turn clockwise</b>
		
<b>A quarter turn anticlockwise</b>	<b>A half turn anticlockwise</b>	<b>A three-quarter turn clockwise</b>
		
<b>A whole turn anticlockwise</b>	<b>A three-quarter turn anticlockwise</b>	
		





**Where is the...?**



**Where is the...?**



**Where is the...?**



**Where is the...?**



**Where is the...?**



**Where is the...?**



**Where is the...?**



Can you find two ways to say where the parrot is?

**Where is the...?**



Can you find two ways to say where the sword is?



**Where is the...?**



Can you find two ways to say where the pirate ship is?

**Where is the...?**



Can you find two ways to say where the pirate flag is?

**Where is the...?**



Can you find two ways to say where the treasure chest is?

**Can you tell me how to get to the treasure chest?**



## Describe Position (2)

### Adult Guidance with Question Prompts

Children describe the position of images, objects and themselves. In addition to 'left' and 'right', children learn to use the terms 'above', 'below', 'top', 'bottom' and 'between'. Children search for ocean treasures and describe the places where they found them. They then read clues to identify where to find sea creatures.

What can you see on your left/right?

What can you see on the left/right of the picture?

What is between the shell and the anchor?

Can you write the word in the box below each picture?

Can you say these words in sentences to tell me where to find each item?

The shell is ... The anchor is ... The chest is ...

What can you see above/below you?

What colour is the fish is above the silver fish?

What colour is the fish is below the blue fish?

Can you show your answer by writing the name of the colour or colouring the box in the space?

Let's read the sentence out loud.

Can you think of another way to describe the position of the green/red fish?

Adult-led activity:

Play noughts and crosses with a difference. Describe to your partner where to make a mark on the grid.



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## Describe Position (2)



Where will you find these?



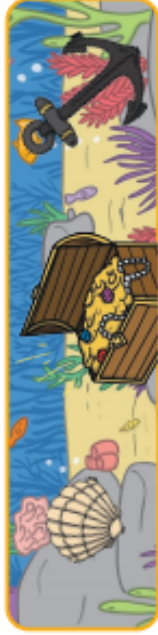
chest



anchor



shell



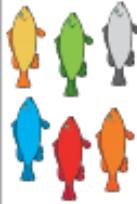
These words might help:

left

between

right

The  fish is above the silver fish.



The  fish is below the blue fish.



## Adult Guidance with Question Prompts

Children describe the position of images, objects and themselves. In addition to 'left' and 'right', children learn to use the terms 'above', 'below', 'top', 'bottom' and 'between'. They help the diver describe the position of the fish in the picture she has taken and follow directions to complete an ocean picture. Children create their own pictures by taking turns to describe what to draw and where to place it on the page.

The diver thinks the fish is in the bottom right of the picture.

Do you agree? Can you prove it?

How would you describe where the fish is?

Is there another way you can describe its position?

Can you follow the instructions to draw the picture?

Can you show me where you will draw the sun/fish/pebble/cloud/bucket?

Can you think of another way to describe their positions?

What could you draw between the sun and the cloud?

Adult-led activity:

Create an 'under the sea' picture with a friend.

Take turns to direct each other.

What should they draw? Where should it go?

Keep going until your picture is complete.

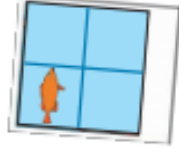
Can you think of another picture you can create together?



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The fish is in the bottom right.



Do you agree?

Can you prove it?

Can you draw the pictures on the grid?



Draw ☀ top right.

Draw 🐟 bottom left.

Draw ☁ below ☀.

Draw ☁ above 🐟.

Draw 🪸 between 🪸 and 🪸.



## Describe Position (2)

### Adult Guidance with Question Prompts

Children describe the position of images, objects and themselves. In addition to 'left' and 'right', children learn to use the terms 'above', 'below', 'top', 'bottom' and 'between'. Using these terms to describe where to find things in everyday life is a great way to practise this skill. Here, children help the diver find safe places to swim in the hazardous ocean. They find different ways to describe where to find the treasure chest. Children then take turns to be the instructor and the builder as they use positional language to create models together.

**The diver is looking for somewhere safe to swim.**

**What hazards can you see in the ocean?**

**Which parts are clear?**

**Can you tell him where it is safe to swim at the moment?**

**What can you see in this picture?**

**How would you describe the position of the treasure chest?**

**Are there more ways that you could describe where it is?**

**How will you know if you have found them all?**

**Can you describe the position of a different object?**

**Can your partner guess which object you are describing?**

**Adult-led activity:**

**Take turns to be the builder and the instructor.**

**The builder follows the directions given by the instructor.**

**Use construction toys or recycled materials to make a model.**



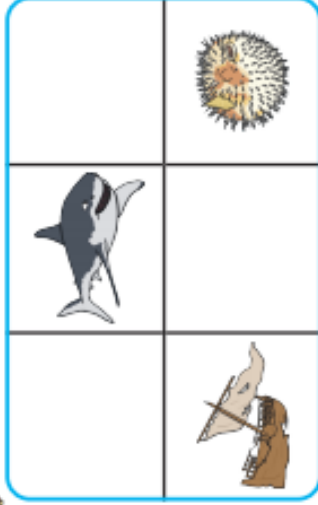
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## Describe Position (2)



Where is it safe to swim?



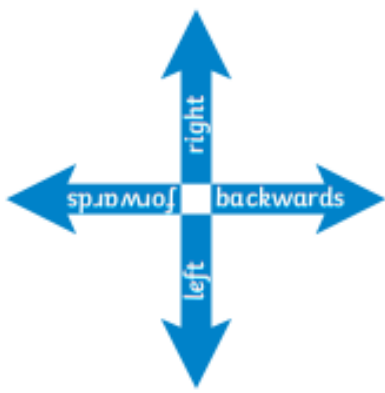

How many different ways can you describe where the treasure is?



Describe where to find an object.


Can your friend guess what it is?





Describing Straight-Line Movement	
	





Describing Turns

  
quarter turn

  
half turn

  
three-quarter turn

  
clockwise

  
anticlockwise

If the turn is in the same direction as the hands of a clock, it is **clockwise**.

If the turn is in the opposite direction to the hands of a clock, it is **anticlockwise**.



Position in the First Quadrant

y Vocabulary

coordinate

quadrant

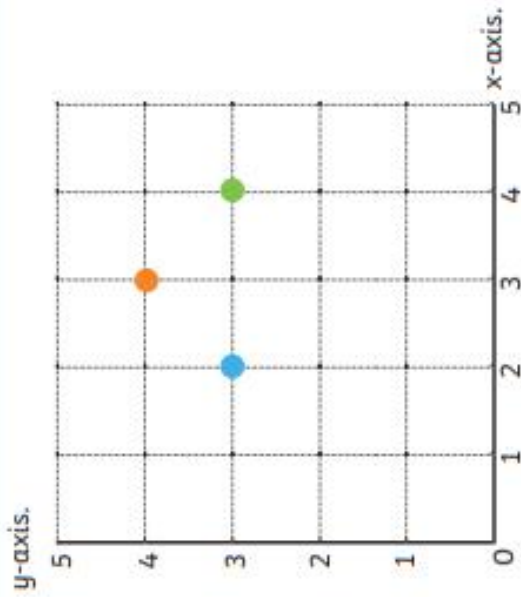
x-axis

y-axis

translation

vertex

vertices



Coordinates are a useful way to locate a position on a map or grid.

The numbers across the horizontal line of the grid are on the **x-axis**.

The numbers on the vertical line of the grid are on the **y-axis**.

We always read or write the number on the x-axis before the **y-axis**.

The x and y position are written in brackets with a comma.

The coordinate of the blue spot is **(2, 3)**.

To help you remember which point to read or write first, simply remember to move 'along the corridor and up the stairs'.

In other words, move on the x-axis and then move on the y-axis.

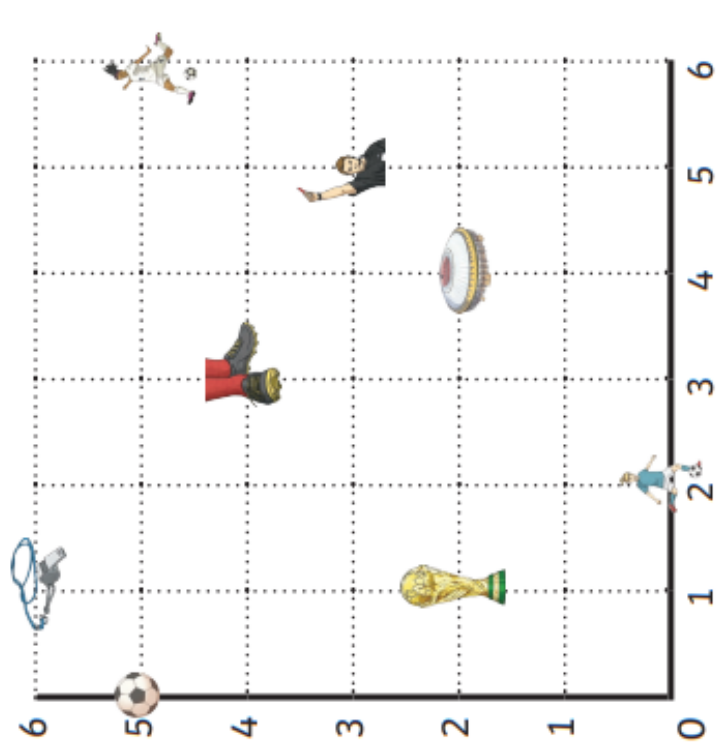


# Football-Themed Coordinates

I can read, write and translate coordinates in the first quadrant.

Write the coordinates of the football-themed objects. Translate them and write the new coordinate.

Object	Starting Coordinate	Translation	Finishing Coordinate
		Right 4	
		Down 2	
		Right 1	
		Up 3	
		Left 2	
		Down 5	
		Left 1	
		Down 2	

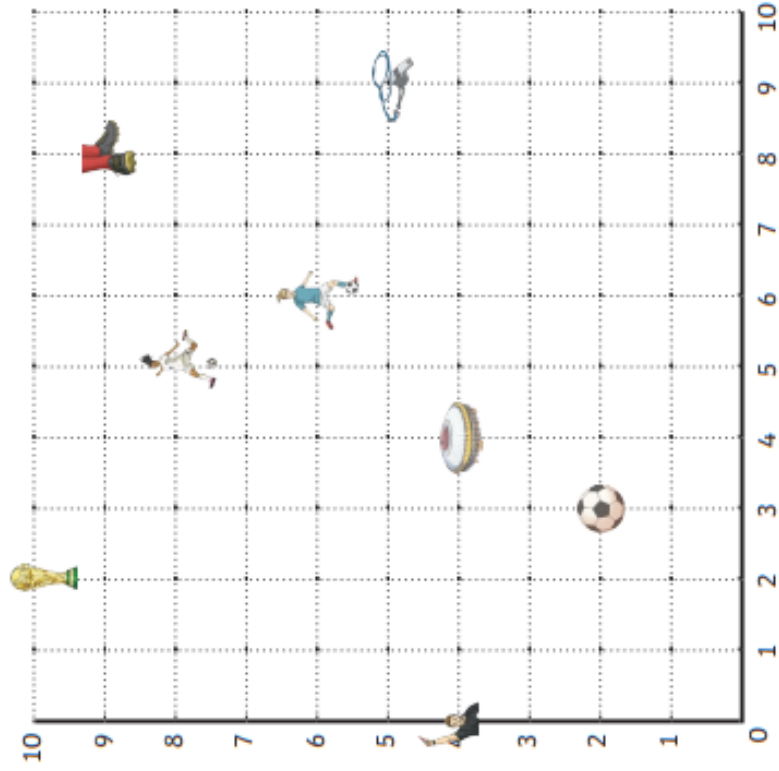




I can read, write and translate coordinates in the first quadrant.

Write the coordinates of the football-themed objects. Translate them and write the new coordinate.

Object	Starting Coordinate	Translation	Finishing Coordinate
		Right 4	
		Down 4	
		Right 3, Down 5	
		Right 6, Up 1	
		Left 3, Up 4	
		Left 7, Up 1	
		Left 1, Down 8	
		Right 5, Up 2	

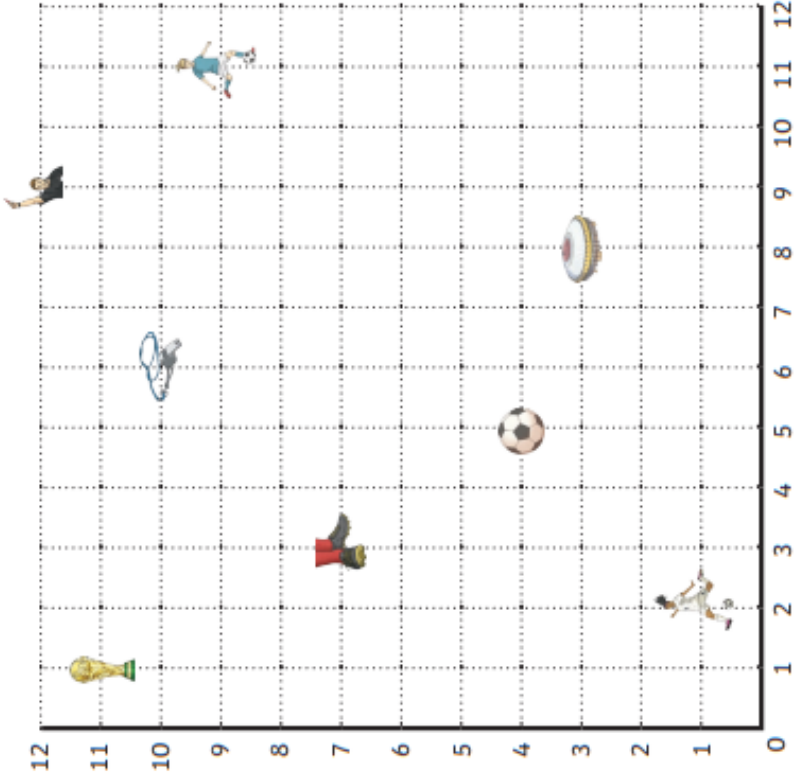




I can read, write and translate coordinates in the first quadrant.

Write the coordinates of the football-themed objects. Translate them and write the new coordinate.

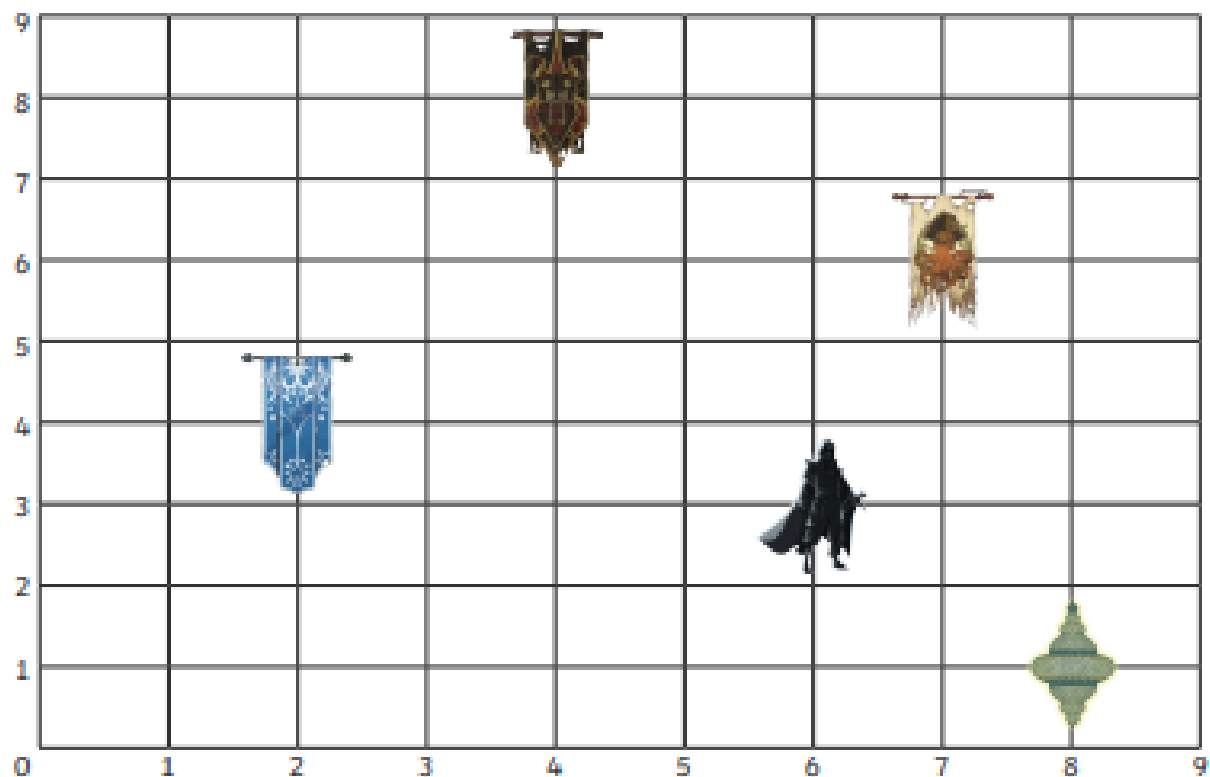
Object	Starting Coordinate	Translation	Finishing Coordinate
		Right 6, Down 2	
		Right 5, Up 1	
		Left 8, Down 5	
		Left 1, Down 9	
		Right 3, Up 7	
		Right 2, Down 10	
		Right 11, Down 7	
		Left 1, Up 6	



# Catanna's Coordinates

I can describe positions on a coordinate grid in the first quadrant.

Catanna Brittlestar is raiding but needs some support – she can't view the Raider's Peril map. Can you write the missing coordinates to support her?



				
Zircon	Gutvine Stronghold	Brittlestar Stronghold	Lemonhead Stronghold	Silken City
( , )	( , )	( , )	( , )	( , )

Catanna is currently located at (3,2). Can you insert a cross to show where she is on the map?

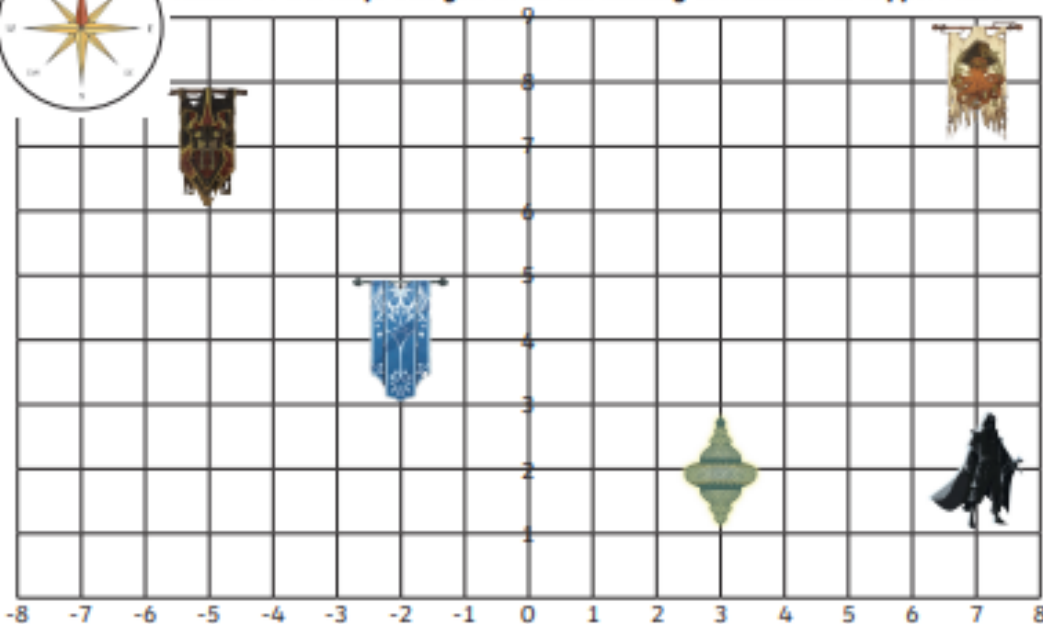
**Challenge:** Use the words **up**, **down**, **left** and **right** to direct Catanna to Zircon.






# Catanna's Coordinates

I can describe positions on a coordinate grid of two quadrants.



Catanna Brittlestar is raiding but needs some support – she can't view the Raider's Peril map. Can you write the missing coordinates to support her?



				
Zircon	Gutvine Stronghold	Brittlestar Stronghold	Lemonhead Stronghold	Silken City
(   ,   )	(   ,   )	(   ,   )	(   ,   )	(   ,   )

**Challenge:** Catanna is currently located at  $(-3, 2)$ .

Can you insert a cross to show where she is on the map?

Catanna needs to get to the Lemonhead stronghold. Describe the journey using your knowledge of coordinates and using your compass skills.

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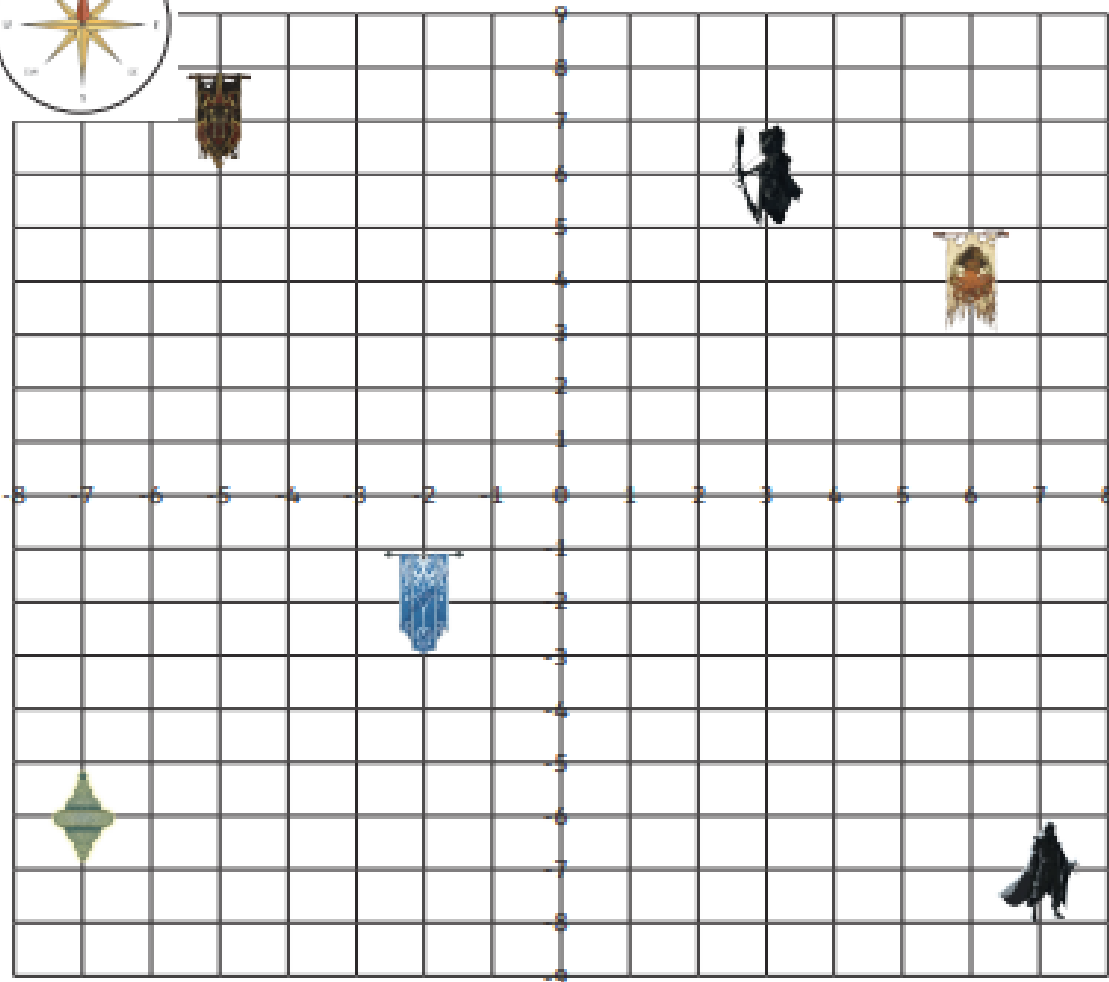


# Catanna's Coordinates

I can describe positions on a full coordinate grid of four quadrants.



Catanna Brittlestar is raiding but needs some support – she can't view the Raider's Peril map. Can you write the missing coordinates to support her?



					
Zircon	Gutvine Stronghold	Brittlestar Stronghold	Lemonhead Stronghold	Silken City	Perian
( , )	( , )	( , )	( , )	( , )	( , )

**Challenge:**

Catanna travels from the Gutvine stronghold to the Silken City. Describe the journey using your knowledge of coordinates and using your compass skills.

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Catanna travels from the Lemonhead stronghold to the Brittlestar stronghold. Describe the journey using your knowledge of coordinates and using your compass skills.

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Catanna travels from the Silken City to meet Perian. Describe the journey using your knowledge of coordinates and using your compass skills.

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**Plot these co-ordinates to make a star picture:**

Line 1: (12,13), (18,20)

Line 2: (10,16), (11,12), (16,12), (12,9), (14,4), (10,7), (6,4), (8,9), (4,12), (9,12), (10,16)

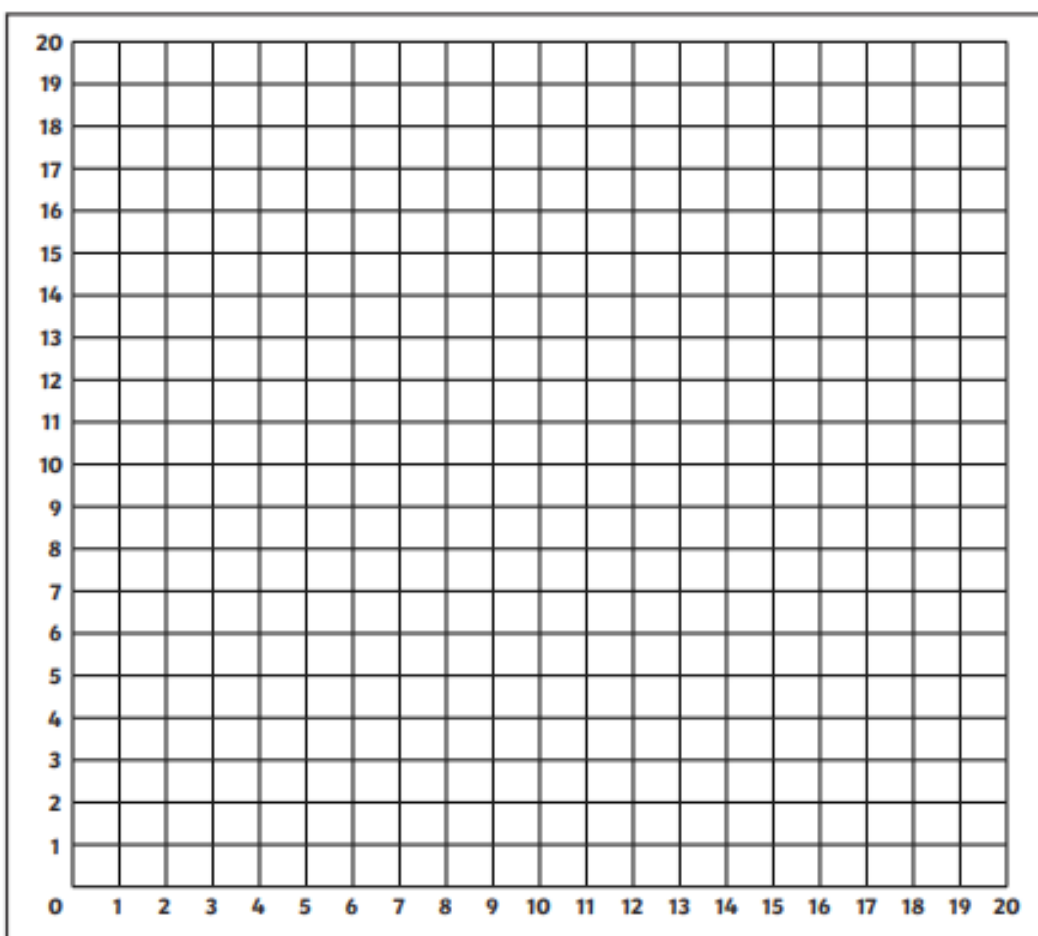
Line 3: (14,8), (20,7)

Line 4: (8,13), (2,20)

Line 5: (10,0), (10,5)

Line 6: (10,20), (12,13), (20,13), (14,8), (17,0), (10,5), (3,0), (6,8), (0,13), (8,13), (10,20)

Line 7: (6,8), (0,7)





# Coordinate Pictures

Plot these co-ordinates to make a picture of a windmill:

Line 1: (8,13), (7,12), (7,10)

Line 2: (11,10), (11,8), (10,7), (15,2), (17,4), (3,18), (5,20), (10,15), (9,14), (9,12)

Line 3: (13,12), (13,8)

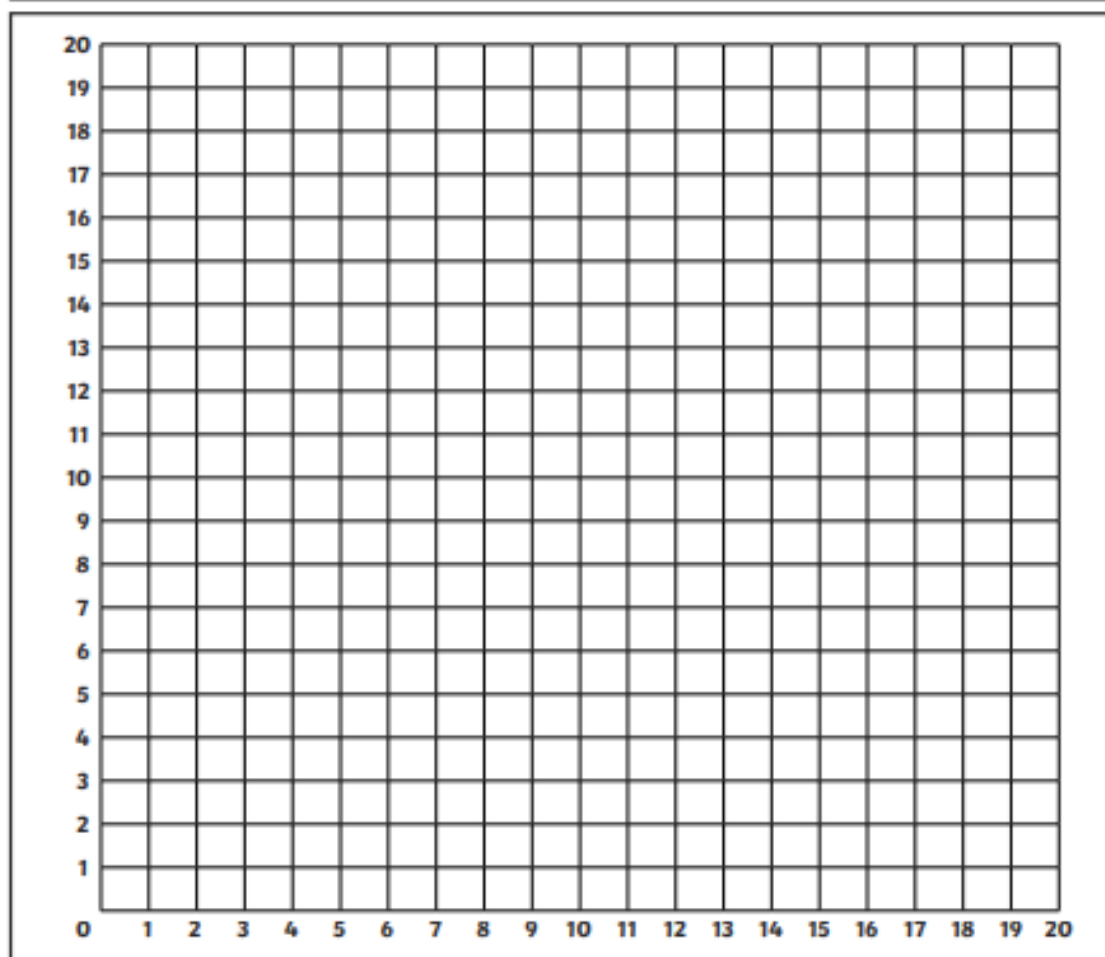
Line 4: (9,14), (11,14), (12,13)

Line 5: (13,4), (13,0), (7,0), (7,8)

Line 6: (8,7), (8,5), (9,5), (9,7), (8,7)

Line 7: (11,12), (13,12), (14,11), (19,16), (17,18), (3,4), (1,6), (6,11), (7,10), (9,10)

Line 8: (11,4), (12,4), (12,2), (11,2), (11,4)





Line 9: (8,4) (15,4)

