

You Need

- One [1] set of eight [8] Octaflex shapes in a frame
- Playing board
- Graph paper (not supplied)

Your Task

1. Place two [2] Octaflex shapes on the white outlines of Diagram 1.

Fit the other six [6] Octaflex shapes onto the white space in the rectangle.

Record your solution on graph paper.

2. Repeat the task for Diagram 2.

Challenge

Fit all eight shapes back into the frame.

Here is a hint.



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OCTAFLEX

DIAGRAM 1

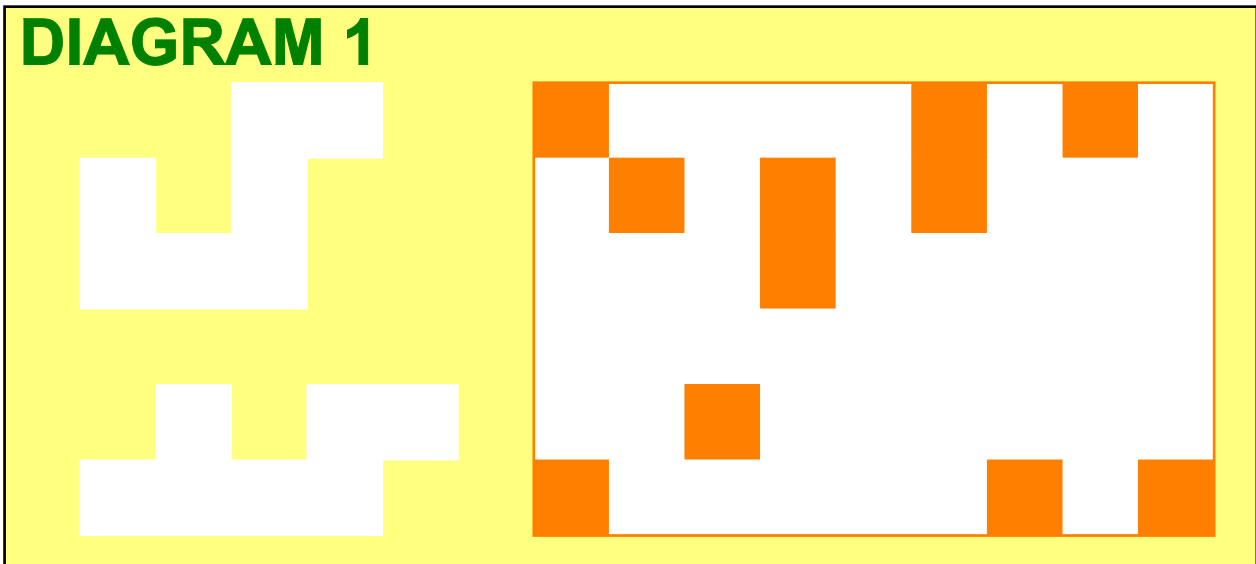
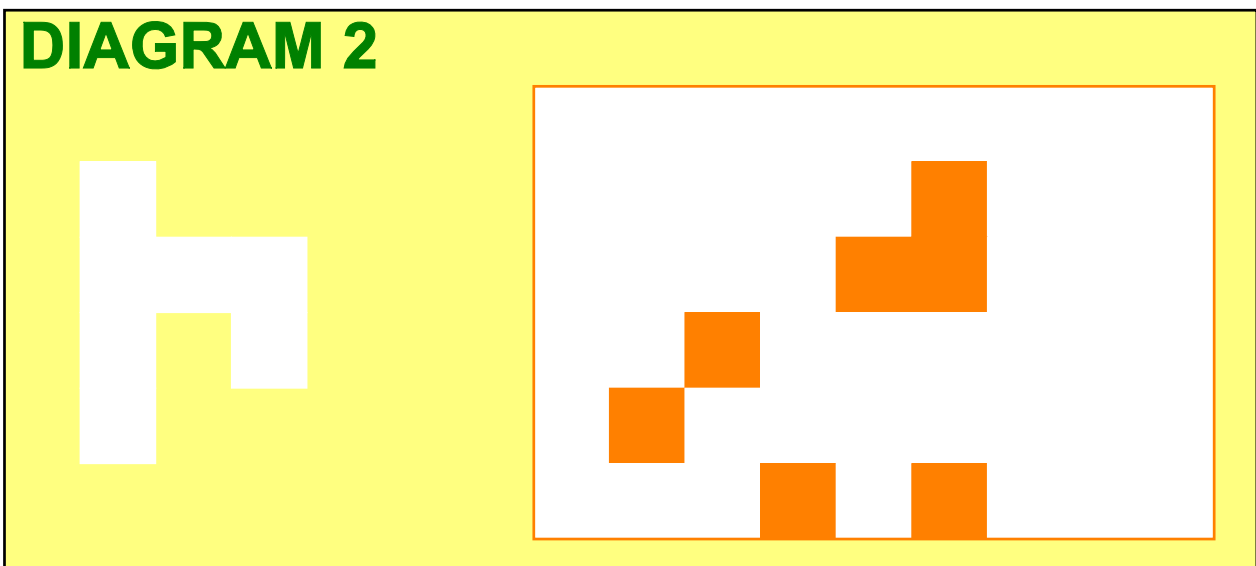


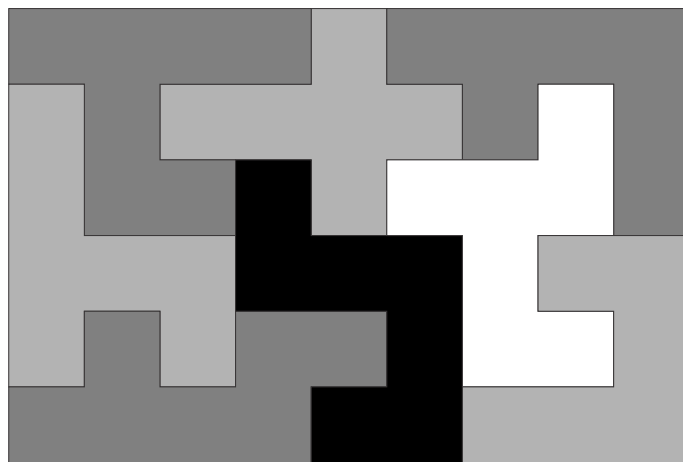
DIAGRAM 2



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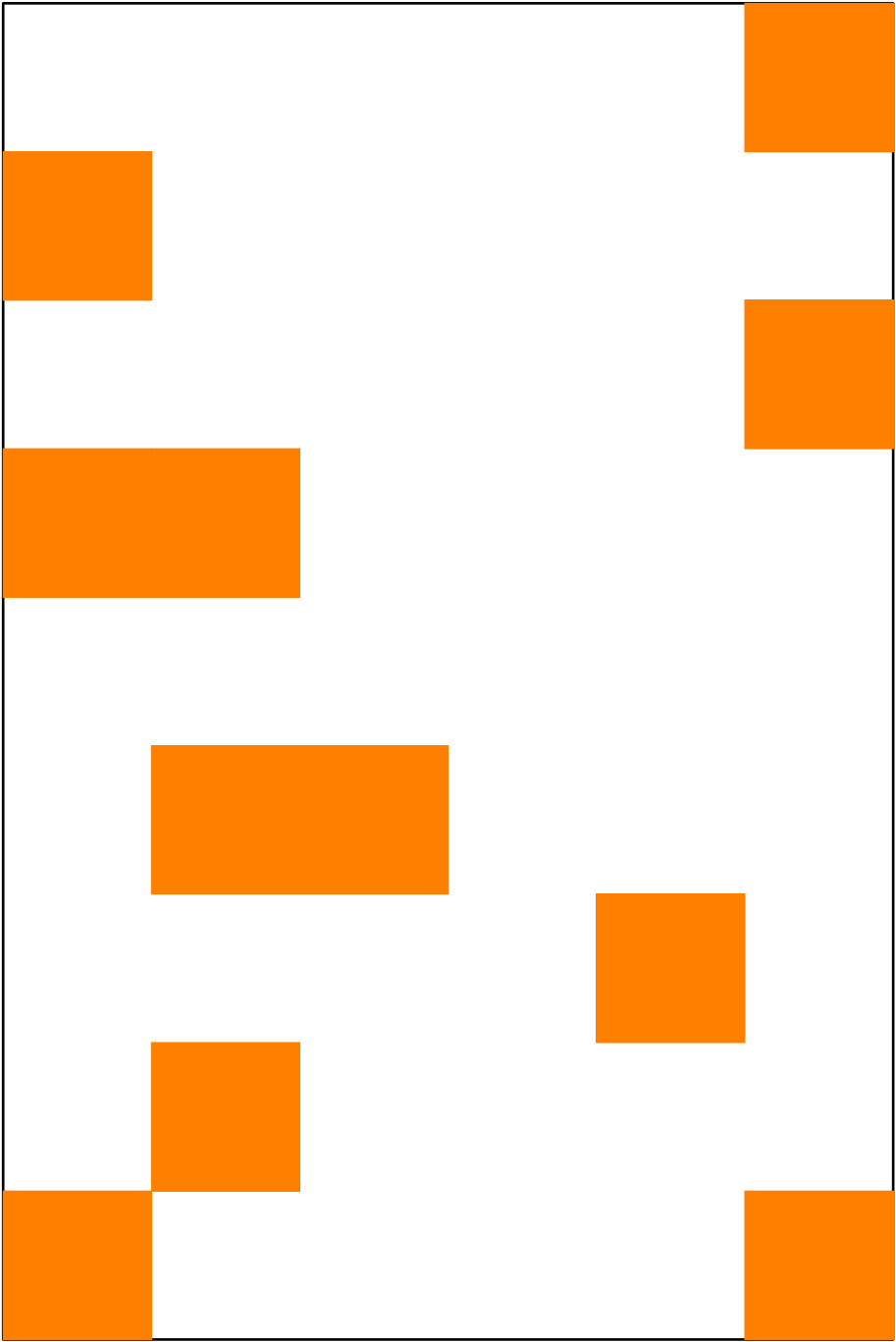
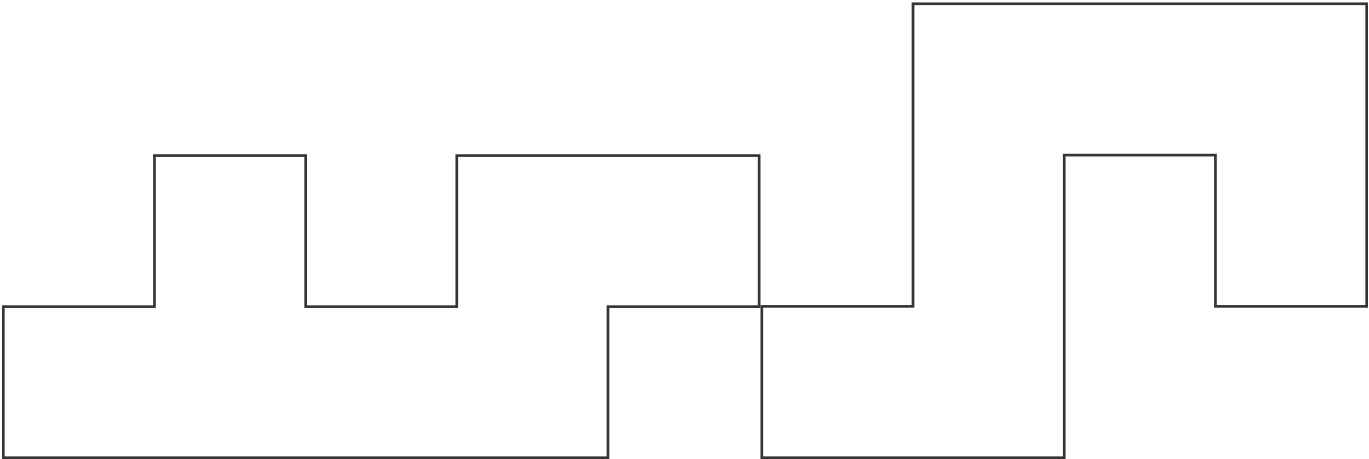
Octaflex Teacher Notes

The previous pages assume access to the original Octaflex equipment made from Plastazote foam as shown in the Task Cameo photo on site. The eight shapes in the original are based on 1cm squares - 6 pieces made of seven squares and 2 pieces made of 6 squares.



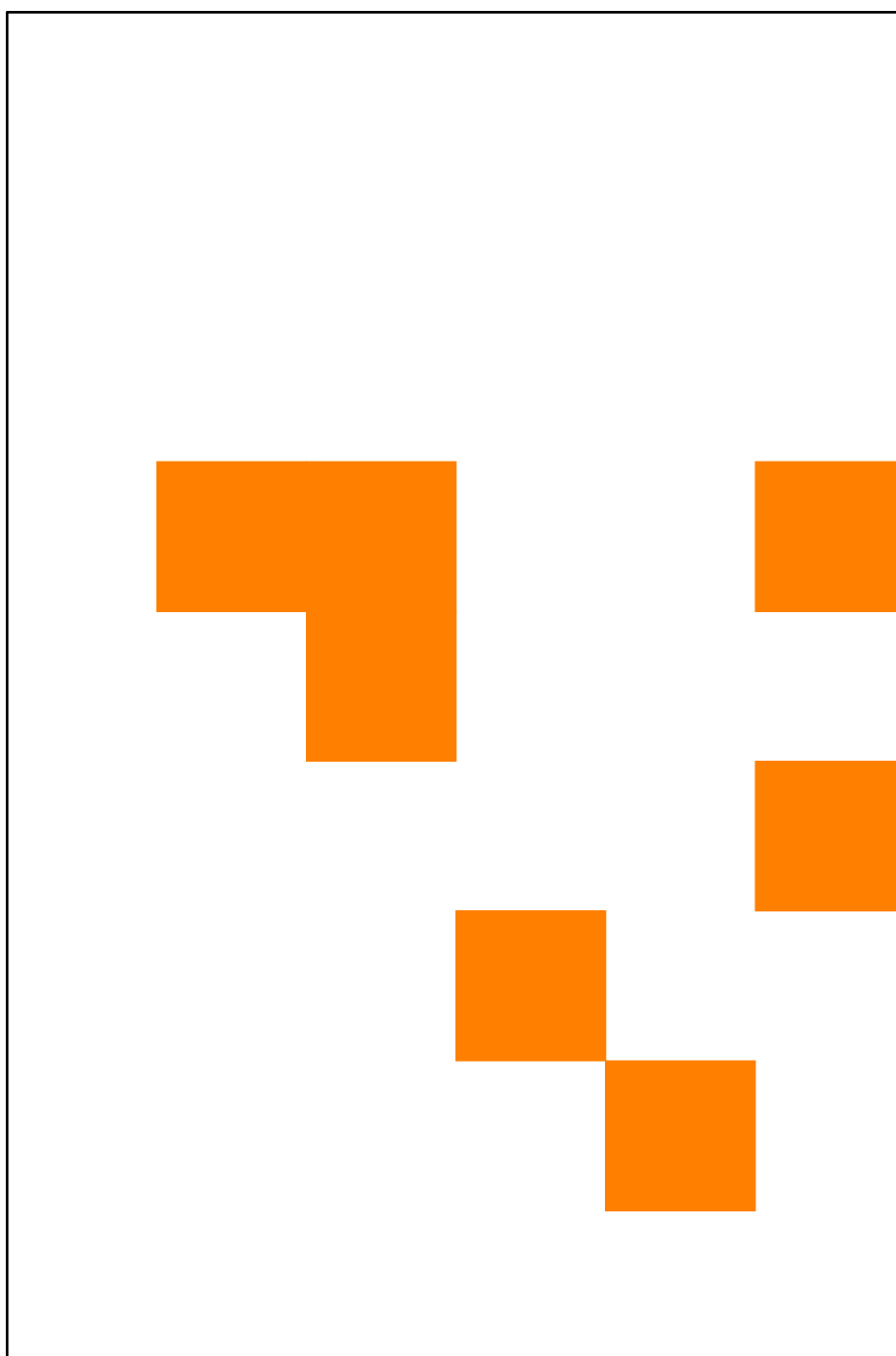
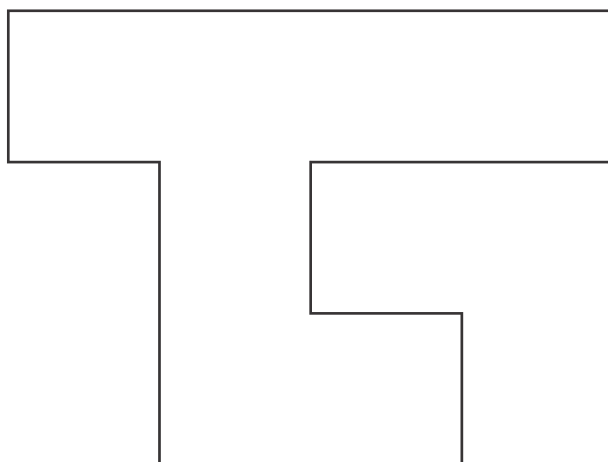
If you don't have the original material use colour coded 1cm linking cubes (one brand is called Centicubes). 2cm linking cubes (one brand is Multilink) will also work. If you use the 2cm size you will need to print the 2cm version of the puzzles which are on the next two pages.

OCTAFLEX DIAGRAM 1



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OCTAFLEX DIAGRAM 2



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You Need

- One [1] set of coloured rods:
20 white, 10 red, 9 light green, 8 pink, 7 yellow,
6 dark green, 5 black, 4 brown, 3 blue, 2 orange

Your Task

1. In a rod mat:

- each row is the same length as the whole.
- all the rods in a row are the same colour.

Brown is the WHOLE							
Pink							
Red							
W							

Make this rod mat

- Brown is the whole. The other rods in the mat are fractions of the whole. Tell your partner which fraction each colour shows. Tell them how you know.
- Write and draw in your journal to explain how you use this mat to find another fraction name for:
 - one eighth + three eighths
 - one half + one quarter - three eighths
- Choose three rods from the mat. Find another fraction name for them.
- Choose four rods from the mat. Find another fraction name for them.
- Write and draw all the fraction 'stories' you can find in your mat.

Challenge

Choose any rod to be the whole. Make the rod mat for your new whole.

Write and draw all the fraction 'stories' you can find in your new mat.

- What happens if the whole is made from two rods?

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You Need

- Two [2] Rotagrams
- One [1] protractor with one degree [1°] marks

This protractor is marked in five degree [5°] steps.

Your Task

1. Imagine you are standing in the middle of the protractor. Face 0° .

Imagine you are turning to face:

90° 180°

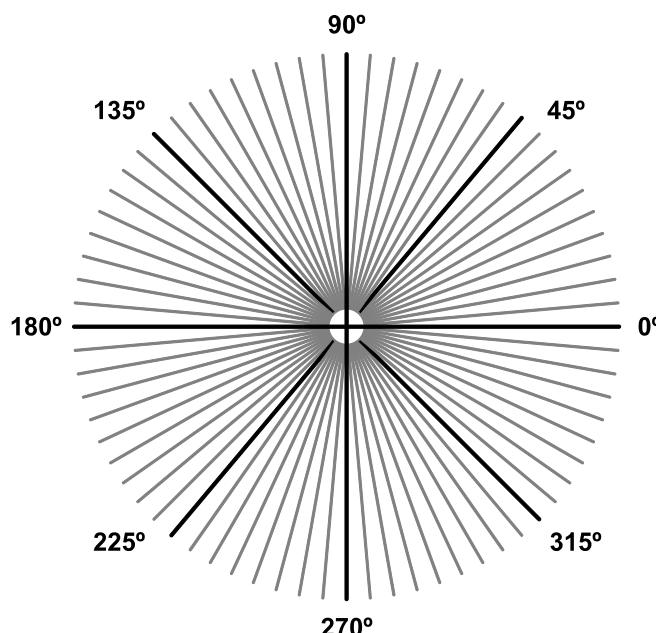
225° 300°

360° 425°

Show each other which ray you would be looking along each time.

2. Your Rotagram makes angles. Turn your back on the card and estimate 75° with the Rotagram. Check on the protractor.

Record how close you were.



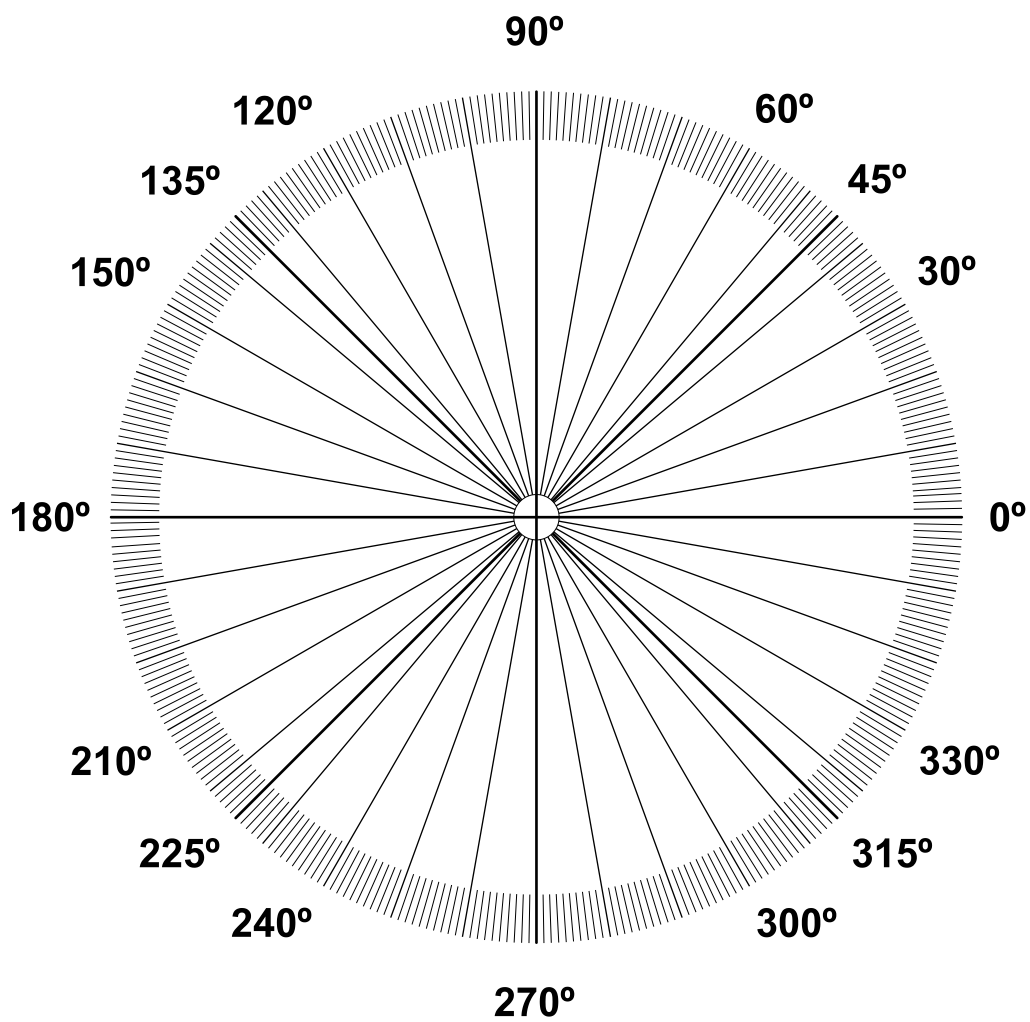
Challenge

Try ten [10] other angles each. Record how close you are each time.

Aim for an *Average How Close* figure under 10° .

Use the 1° protractor if you want to try to be more accurate.

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Angle Estimation

cut into two protractors

Task 214

