

Approach: One to one

Year: 8

Focus: Cross sections

Resources: 5 geometric solids, shape board, recording book

Questions / instructions:

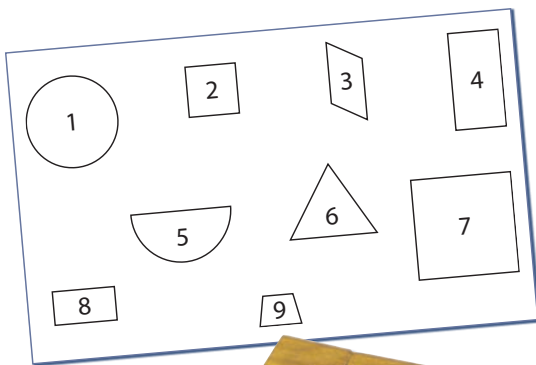
In this activity I am going to show you some solid shapes with lines drawn on them. Here is an example.

Show student the cube and point to the line around the cube.

Imagine that I am going to cut through this shape on this line. I want you to think about what the face of the shape would look like after the cut was made. Here is an example.



Place the *Shape Lines* board in front of the student. Hold the two pieces of the wedge shape together and show them to the student.



Here is a shape that has already been cut through the line. The line went around here.

Point along cut.

1. What would the shape of the face, where it was cut, look like? **not marked**

This board shows a range of different shapes and sizes.

2. Which shape on this board would match the face on the solid shape after it was cut? **not marked**

If student doesn't point to the small rectangle (8), say: 'It would be a rectangle or oblong shape like this one'. (Point.)

Open two pieces and show the student the shape of the cut face.



Now try and match the shapes for these solid objects if they were cut.

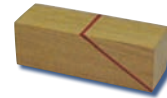
Show the cube [same cube as before].

Imagine that I cut on this line.

3. Which shape on the board would match the cut face of this solid?

shape 6

Show the rectangular solid.



4. Which shape would match the cut face of this solid?

shape 4

Show the pyramid.



5. Which shape would match the cut face of this solid?

shape 2

Show the cylinder.



6. Which shape would match the cut face of this solid?

shape 7

Total Score: 4
3
2
0-1

Linked to 1997

% response 2009 ('97)

year 8

90 (93)

55 (68)

75 (79)

23 (28)

17 (25)

32 (38)

30 (21)

21 (16)

Linked to 1997

% response 2009 ('97)

year 8

• (•)

• (•)

Subgroup Analyses:

Year 8

Score Range

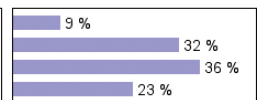
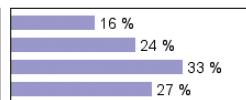
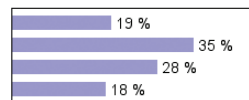
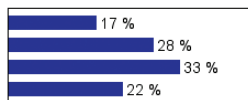
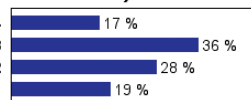
Boys

Girls

Pakeha

Māori

Pasifika



Commentary:

This task explored trends between 1997 and 2009. A small decline in performance over the 12-year period is evident. Māori and Pasifika students performed quite similarly to Pakeha students.