

Lesson 169 • Prisms and Pyramids

Learning objectives

Children will:

- learn to identify prisms and pyramids.
- recognise nets of prisms and pyramids.

Australian Curriculum Content Descriptions

Measurement and Geometry

Shape

ACMMG063 Make models of three-dimensional objects and describe key features; explore the creation of three-dimensional objects using origami, including prisms and pyramids.

Key vocabulary

prism, faces, triangular, rectangular, cross-section, hexagonal, square, pyramid, base, apex, net

Extra assistance

The features of 3D objects are what define the categories of these shapes. In the same way all quadrilaterals have 4 sides, all pyramids have a base shape, an apex and a set of triangular faces. All prisms have 2 ends the exact same size and shape, and the faces between are all rectangles. Another correlation between 2D and 3D shape categories is that, since squares are types of rectangles, a cube is actually a rectangular prism.

Worksheet answers

Worksheet 1

- 1 **a-d** Teacher to check
- 2 **a** triangular prism **b** rectangular prism
c hexagonal prism **d** pentagonal prism
- 3 **a** 2 triangles, 3 rectangles **b** 6 rectangles
c 2 hexagons, 6 rectangles **d** 2 pentagons, 5 rectangles

Worksheet 2

- 1 **a-d** Teacher to check
- 2 **a** triangular pyramid **b** rectangular pyramid
c pentagonal pyramid **d** square pyramid
- 3 an apex
- 4 **a** 4 triangles **b** 1 rectangle, 4 triangles
c 1 pentagon, 5 triangles **d** 1 square, 4 triangles

Worksheet 3

- 1 **a** triangular prism **b** pentagonal pyramid
c rectangular prism **d** triangular pyramid
e square pyramid
- 2 **a** E **b** D **c** A **d** C
e B

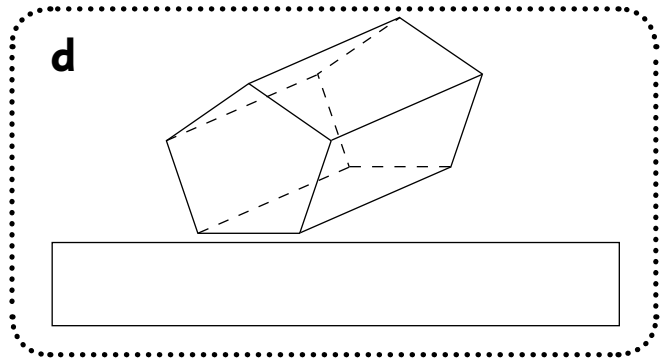
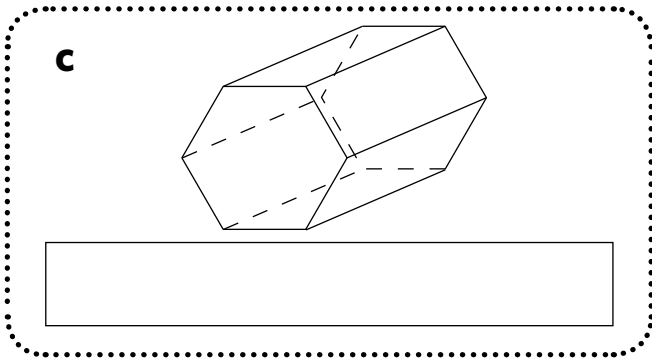
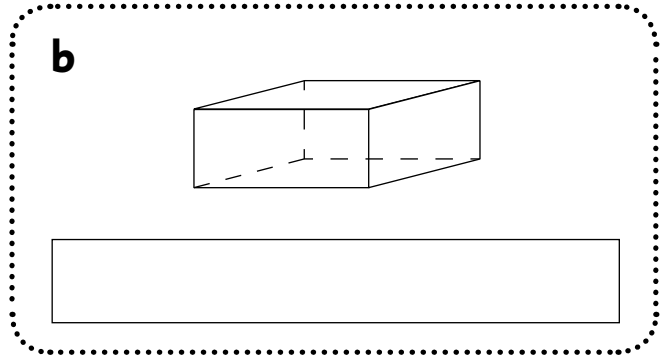
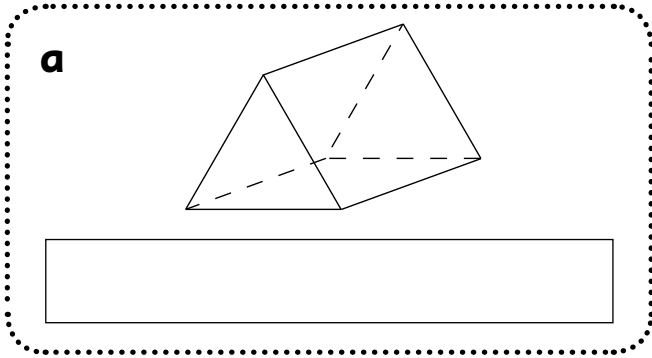
Worksheet 4

- 1 **a** end face **b** vertex **c** apex **d** face
e base **f** edge
- 2 **a & b** Teacher to check
- 3 **a & b** Teacher to check

Mathseeds Lesson sequence	TEACH Content and skills	PRACTISE Children will:	APPLY
<i>Animated Lesson:</i> Differentiate 3D shapes	Identify prisms and pyramids by their faces, or base and apex. Understand what a cross-section and a net are.	recognise the features of a prism and a pyramid. Name prisms for their end faces and pyramids for their base shape. Match shapes to nets.	Worksheet 1 Prisms
<i>Features of 3D objects:</i> Edges, Faces, Four in a Row, Vertices, 3D Table	Recognise edges, faces and vertices of 3D objects.	count the number of edges, faces, flat faces or vertices.	Worksheet 2 Pyramids
<i>Identify 3D objects:</i> Find the Match	Identify 3D objects.	find the matching pairs of 3D objects.	Worksheet 3 Nets
<i>2D shapes:</i> Make the Shape, 2D Table, Sort the Shapes	Identify parts of a larger shape. Recognise sides and vertices of 2D shapes. Sort 2D shapes by number of sides.	drag smaller shapes to make a larger shape. Count the number of sides and vertices. Move shapes to labels 'quadrilaterals' or 'non-quadrilaterals'.	Worksheet 4 Check
<i>End of Lesson Quiz</i>	Test understanding of lesson content and skills.	complete a 10 question quiz to earn a reward game.	<i>Reward game:</i> Monster Mayhem

Name _____

1 Colour the end faces of these prisms. 2 Name each prism.

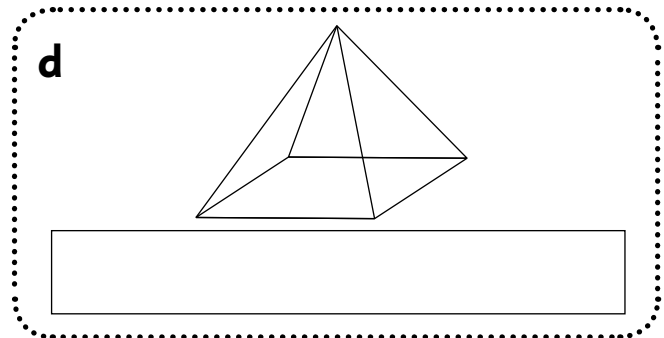
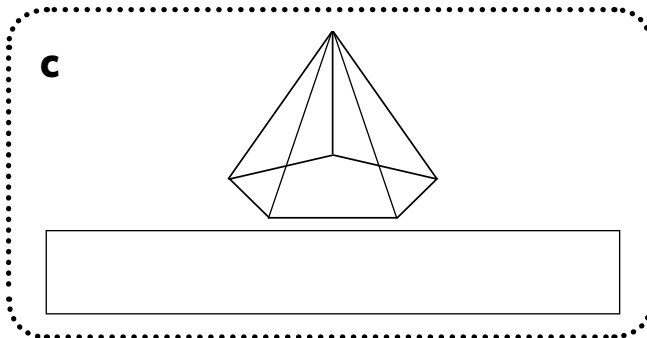
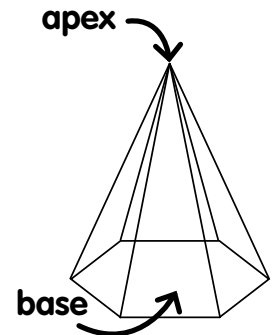
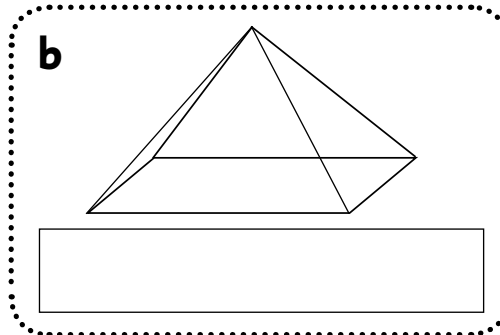
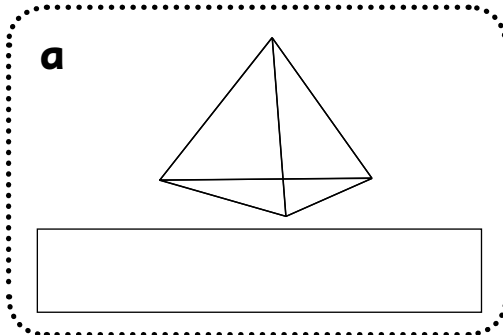


3 Draw all the faces for each prism.

Prism	Faces							
a Triangular								
b Rectangular								
c Hexagonal								
d Pentagonal								

Name _____

- 1 Colour the bases of these pyramids. 2 Name each pyramid.



- 3 What does a pyramid have that a prism does not? _____
- 4 Draw all the faces for each pyramid.

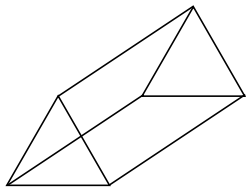
Pyramid	Faces							
a Triangular								
b Rectangular								
c Pentagonal								
d Square								

Name _____

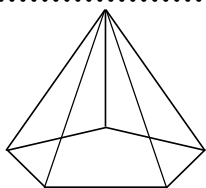
1 Name the 3D objects.

2 Match the 3D objects to their nets.

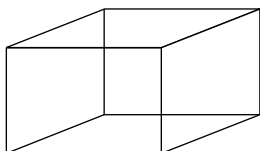
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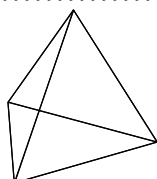
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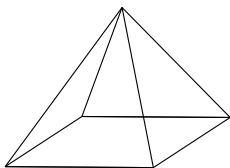
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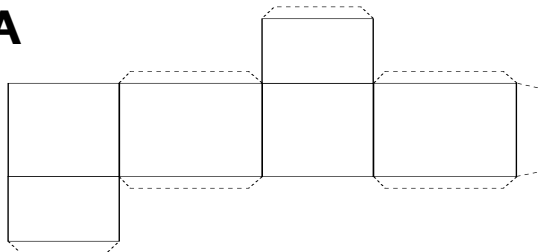
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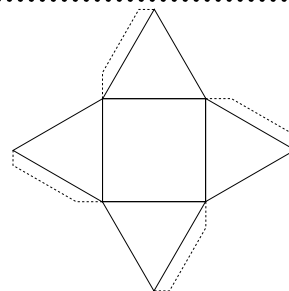
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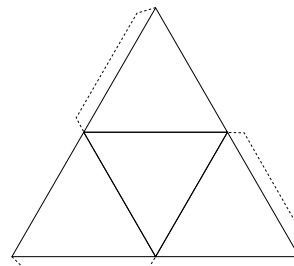
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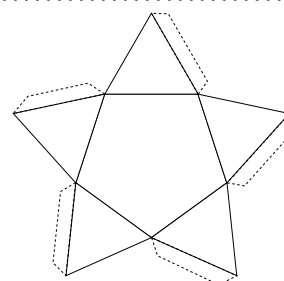
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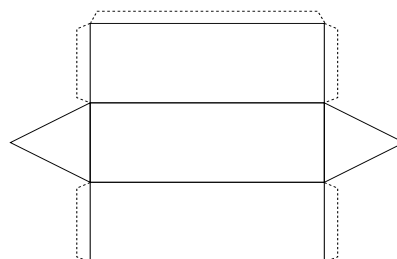
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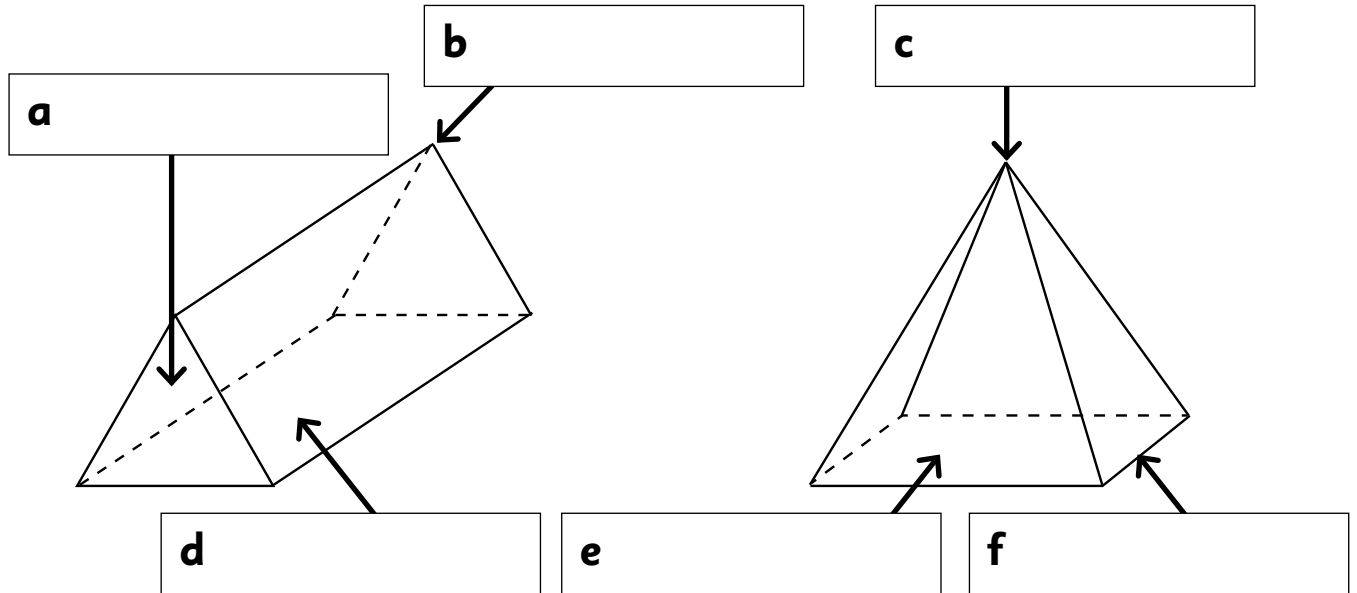


E



Name _____

1 Label the features of these shapes.



2 Draw the net for these shapes.

a square prism

b rectangular pyramid

3 Draw these shapes.

a rectangular prism

b triangular pyramid