

3D Trigonometry

Syllabus tracker [Open it online](#)

Name: _____

Date: _____

Tick one circle for each statement — on screen (click) or with a pen. Then try the quick checks: write your answer in the box, check it against the answers at the end, and tick “right” when you got it.

Cuboids and cubes

Space diagonals and angles with a face.

	Don't know	Shaky	Got it
I can find the length of a space diagonal.	☐	☐	☐
I can find the angle between a space diagonal and the base.	☐	☐	☐

Pyramids

Vertical heights and the angle between a line and a plane.

	Don't know	Shaky	Got it
I can find the vertical height of a pyramid.	☐	☐	☐
I can identify the angle between a line and a plane.	☐	☐	☐

Prisms and wedges

Right-angled triangles inside prisms.

	Don't know	Shaky	Got it
I can find a length in a prism using two right-angled triangles.	☐	☐	☐

Quick checks

One quick question per statement. Answer in the box, then check the answers at the end.

1. A cuboid is 3 cm by 4 cm by 12 cm. Find the length of its space diagonal, in cm.

Answer: _____ ☐ I got it right

2. A cuboid is 6 cm by 8 cm by 5 cm high. The base diagonal is 10 cm. Find the angle between the space diagonal and the base, to 1 decimal place.

Answer: _____ ☐ I got it right

3. A square-based pyramid has base 6 cm by 6 cm and sloping edges 5 cm. Find its vertical height to 3 significant figures (in cm).

Answer: _____ ☐ I got it right

4. The angle between a sloping edge of a pyramid and its base is the angle between the edge and...

A its projection on the base **B** the vertical height **C** another sloping edge **D** a side of the base

Answer: _____ ☐ I got it right

5. A box is 12 cm long, 4 cm wide and 3 cm high. Find the length of the longest rod that fits inside, in cm.

Answer: _____ ☐ I got it right

Answers

Try every question first, then check.

1. 13

2. 26.6

3. 2.65

4. A: its projection on the base

5. 13