Pythagoras and trigonometry in 3D

Exit ticket ANSWERS Name _____

1. A cuboid is 12 cm by 9 cm by 8 cm tall. Find the angle θ between the diagonal AG and the base.

   28.1°

2. A pyramid has a square base of side 6 cm. Its top is 8 cm above the centre of the base. Find the angle θ between a sloping edge and the base.

   62.1°

3. A cuboid is 2 cm by 3 cm by 6 cm tall. Find the length of AG and the angle θ it makes with the base.

   7 cm, 59.0°

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1 **A cuboid is 12 cm by 9 cm by 8 cm tall. Find the angle θ between the diagonal AG and the base.**

28.1°

TESTS A cuboid: AC, then the angle

LOOK FOR *33.7°* an edge used, not AC

FIX IT A cuboid is 8 cm by 15 cm by 10 cm tall. Find the angle between AG and the base. *30.5°*

2 **A pyramid has a square base of side 6 cm. Its top is 8 cm above the centre of the base. Find the angle θ between a sloping edge and the base.**

62.1°

TESTS A pyramid: half the diagonal of the base

LOOK FOR *69.4°* half the side used, not half the diagonal

43.3° the whole diagonal used

FIX IT A pyramid has a square base of side 10 cm. Its top is 9 cm above the centre of the base. Find the angle between a sloping edge and the base. *51.8°*

3 **A cuboid is 2 cm by 3 cm by 6 cm tall. Find the length of AG and the angle θ it makes with the base.**

7 cm, 59.0°

TESTS The length of AG and its angle

LOOK FOR *11 cm* the edges added, not squared

40.6° tan used with AG as the adjacent

FIX IT A cuboid is 4 cm by 4 cm by 7 cm tall. Find the length of AG and the angle it makes with the base. *9 cm, 51.1°*