**PYTHAGORAS:**

**3D**

**A**

**Pythagroas**

**GRADE BUSTER**

*Your ‘5 a day’ mathematical workout*

1. Calculate the length of the AG:

6cm

3cm

2cm

A

C

E

D

B

G

H

F

2. Calculate the perpendicular height of a square based pyramid with base length 8cm and sloping side 16cm.

A

C

E

D

B

G

H

F

3. The length of AG is between 20cm and 50cm.

Find the possible dimensions of 3 different

 cuboids.

4. i) Explain what is wrong with the following solution:

*Need to find the diagonal AC of the base:*

*AC2 = 102 + 42*

*AC2 =100 + 16*

*AC2 =116*

*AG2 = 1162 + 52*

*AG2 = 13456 + 25 = 13481*

*AG =* $\sqrt{13481}$ *= 116.1cm (to 1dp)*

Calculate the length of the AG:

G

10cm

5cm

4cm

A

C

E

D

B

G

H

F

5cm

116cm

C

A

ii) Find the correct solution

5) Will a 15cm ruler fit into Pete’s pencil case? Explain your answer.

8cm

7cm

10cm

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| Qu |  | ☺ | ☹ |
| 1, 2, 3 & 4 | I can find lengths in 3D solids using Pythagoras Theorem |  |  |
| 5 | I can solve 3D problems using Pythagoras Theorem |  |  |

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| Top tips I must remember for the exam: |
| ☺☺☺ |
| Types of questions I need to practise more: |
| ☺☺☺ |