**End of Unit Test** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Measures - HIGHER**

**1.** Which of these is used to work out density? Tick a box.

|  |  |  |
| --- | --- | --- |
|   | mass × volume |  |
|   | mass2 × volume |  |
|   | mass ÷ volume |  |
|   | volume ÷ mass |  |

**(Total 1 mark)**

 **2.** The table shows information about journeys A and B. Complete the table.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   |   | **Distance travelled** | **Time taken** | **Average speed** |
| **A** | 32 miles |    | 64 mph |
| **B** |    | 1 hour 20 minutes | 42 mph |

…………………………………………………………………………………………………………

…………………………………………………………………………………………………………

…………………………………………………………………………………………………………

…………………………………………………………………………………………………………

…………………………………………………………………………………………………………

…………………………………………………………………………………………………………

…………………………………………………………………………………………………………

**(Total 2 marks)**

**3.** *PQR* is an enlargement of *ABC*. Not drawn accurately.

    

(a) Work out the scale factor of the enlargement.

 …………………………………………………………………………………………………

Answer ......................................................................

**(1)**

(b) Write down the size of angle *P*.

Answer ........................................................ degrees

**(1)**

(c) Work out the length *AB*.

 …………………………………………………………………………………………………

Answer ................................................................ cm

**(2)**

**(Total 4 marks)**

**4.** These two solid shapes are similar. Not drawn accurately.



The volume of *A* is 1400 cm3. Work out the volume of *B*.

…………………………………………………………………………………………………………

…………………………………………………………………………………………………………

…………………………………………………………………………………………………………

…………………………………………………………………………………………………………

…………………………………………………………………………………………………………

   Answer ........................................................................ cm3

**(Total 3 marks)**

**5.** Three items were bought at a car boot sale.

|  |  |  |  |
| --- | --- | --- | --- |
|   | Item A | Item B | Item C |
|   | Mass = 9.5 gramsVolume = 2 cm3 | Mass = 57 gramsVolume = 3 cm3 | Mass = 76 gramsVolume = 4 cm3 |

The density of gold is **approximately** 19 grams per cm3. Which item or items **cannot** be gold? You **must** show your working.

…………………………………………………………………………………………………………

…………………………………………………………………………………………………………

…………………………………………………………………………………………………………

…………………………………………………………………………………………………………

…………………………………………………………………………………………………………

…………………………………………………………………………………………………………

…………………………………………………………………………………………………………

…………………………………………………………………………………………………………

Answer ......................................................................

**(Total 4 marks)**

**6.** The distance around a cycle track is 400 metres. Robin cycles on the track. Here is his speed-time graph.



(a) Show that Robin cycles **exactly** once around the track in 110 seconds.

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

 **(3)**

(b) Sanjay cycles on the same track. Here is his speed-time graph.



Does Sanjay cycle the first 400 metres in a quicker time than Robin? You **must** show your working.

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

 **(3)**

**(Total 6 marks)**

 **(Total for test = 20 marks)**