

## PROPERTIES OF MATERIALS

TO ANSWER ALL THE QUESTIONS YOU WILL NEED TO DOWNLOAD THE 'PROPERTIES OF MATERIALS' APP, FROM THE INTERACTIVE MOBILE APP SECTION OF [www.technologystudent.com](http://www.technologystudent.com)

### LINK

([http://www.technologystudent.com/mobapps/properties\\_materials1.pdf](http://www.technologystudent.com/mobapps/properties_materials1.pdf))

Once you have downloaded the App, you can use it to navigate the website. You may need to follow the links on each page of the App, to research / complete answers to all the questions.

**ARE YOU READY?  
USE THE MOBILE App!!**

1a

WRITE A DEFINITION OF 'STRENGTH' - include a sketch of commercial testing.

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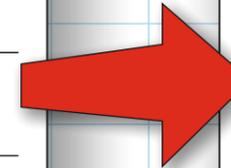
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1b

COMMERCIAL TEST



2a

WHEN A MATERIAL DISPLAYS THE PROPERTY CALLED ELASTICITY, WHAT DOES THIS MEAN?

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2b

DESCRIBE THE 'COMMERCIAL TEST' FOR ELASTICITY BEING CARRIED OUT BELOW.

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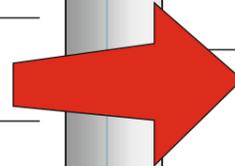
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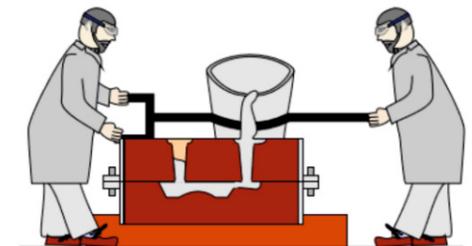
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3

WHY IS THIS A DEMONSTRATION OF PLASTICITY?



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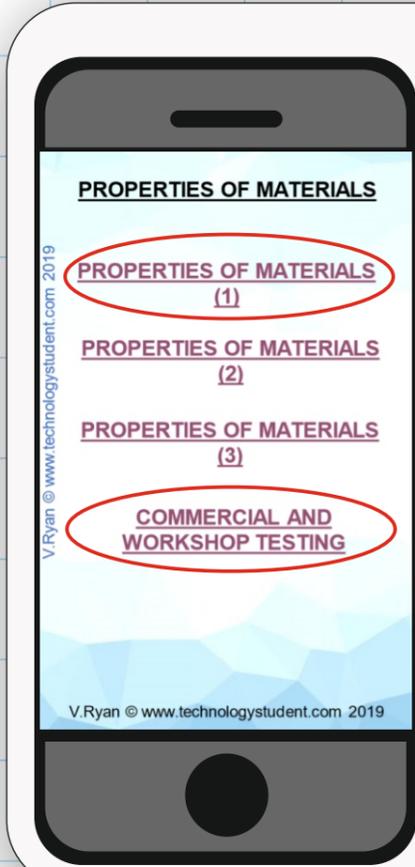
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**ARE YOU READY?  
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**1a** EXPLAIN THE PHYSICAL PROPERTY CALLED 'DUCTILITY'?

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**1b** DESCRIBE A COMMERCIAL TEST FOR DUCTILITY.

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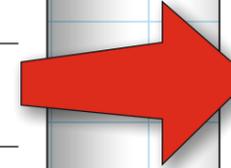
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**2a** WHAT IS MEANT BY THE TENSILE STRENGTH OF A MATERIAL?

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**2b** WITH THE AID OF A SKETCH, DESCRIBE A 'WORKSHOP' TEST, TO DETERMINE TENSILE STRENGTH.

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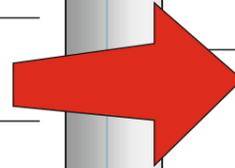
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**3** HOW DOES THIS MACHINE MEASURE TENSILE STRENGTH?

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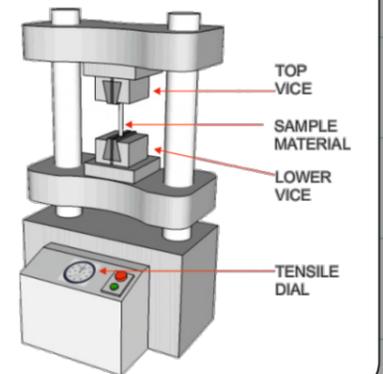
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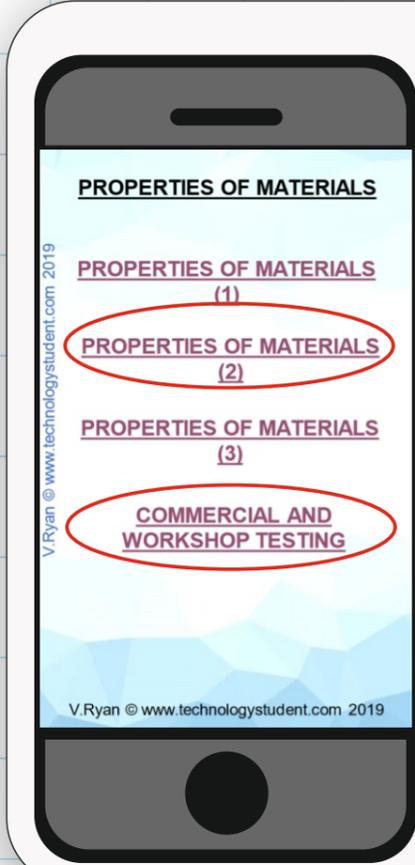
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**ARE YOU READY?  
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**1a** EXPLAIN THE PHYSICAL PROPERTY CALLED 'MALLEABILITY'?

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**1b** DESCRIBE A WORKSHOP TEST FOR MALLEABILITY.

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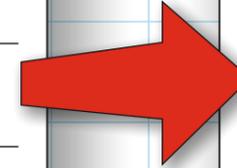
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**2a** WHAT IS MEANT BY THE 'TOUGHNESS' OF A MATERIAL?

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**2b** DESCRIBE THE TEST FOR 'TOUGHNESS', AS SHOWN BELOW.

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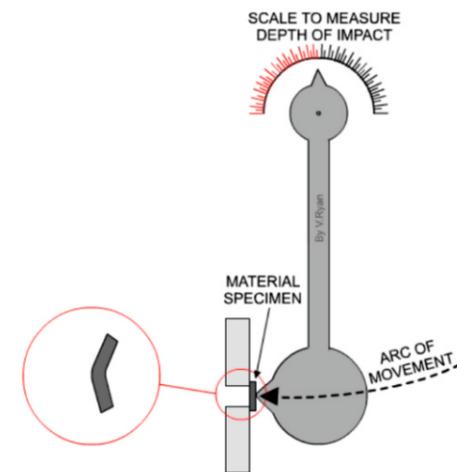
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**3** WHAT IS MEANT BY THE HARDNESS OF A MATERIAL?

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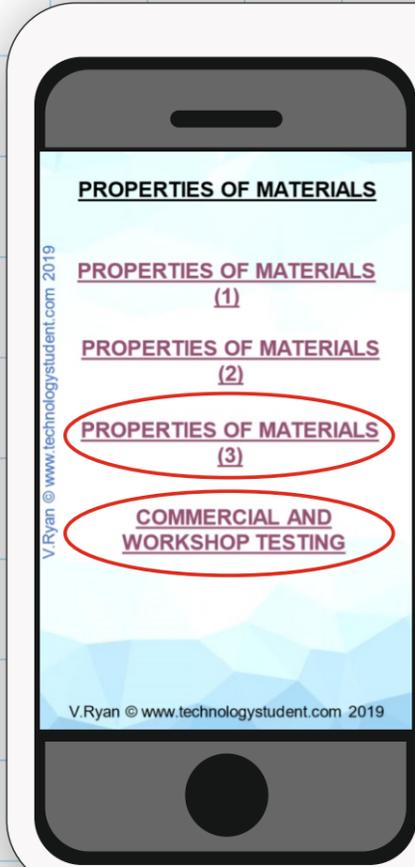
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**1** EXPLAIN THE PHYSICAL PROPERTY CALLED 'ADSORBENCY'?  
(Include reference to a sponge)

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**2** WHY IS THE DENSITY OF A SPONGE, LESS THAN THAT OF STEEL, IF BOTH SAMPLES ARE THE SAME VOLUME?

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**3a** WRITE A DEFINITION OF 'FUSIBILITY'.

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**3b** DESCRIBE A PRACTICAL APPLICATION OF FUSIBILITY.  
Include a sketch / image.

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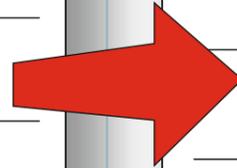
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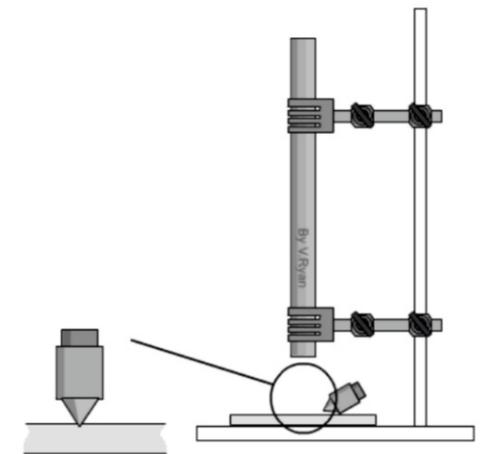
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**4** WHAT PROPERTY IS BEING TESTED HERE?

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