

## STUDENTS WORKSHEET ELASTICITY

1. What is motorbike's shock breaker made from?
2. What will happen to the length of the spring if we pull it with a certain force? And what will happen if you release it?
3. When a material is called to be elastic? When a material is called to be plastic? Give five examples for each of them!
4. Give brief explanation and write down the equation of these terms:
  - a. Stress
  - b. Strain
  - c. Modulus elasticity
5. Find the equation of force that act on a material from the equation from the equation of Modulus Elasticity! As we know that Modulus elasticity, cross sectional area, and the initial length of the spring is constant, we can write it in the form of  $F = k x$ , where  $k$  is spring constant
6. What is the direction of the force that act on our hand if we pull the a spring to the left? The force that act on our hand is called **restoring force**
7. A wire has cross sectional area of  $5 \text{ mm}^2$ , then it is given a force of  $10 \text{ N}$  so that its length increases from  $8 \text{ cm}$  to  $8.08 \text{ cm}$ . The strain of the wire is.....
8. A spring that is hung vertically is  $15 \text{ cm}$  in length. If it is stretch with a force of  $0.5 \text{ N}$ , its length becomes  $27 \text{ cm}$ . What is its length if it is stretched with a force of  $0,6\text{N}$ ?
9. A metal has modulus elasticity of  $4 \times 10^6 \text{ N/m}^2$ , cross sectional area is  $20 \text{ cm}^2$  and length of  $5 \text{ m}$ . The force constant of the metal is .....