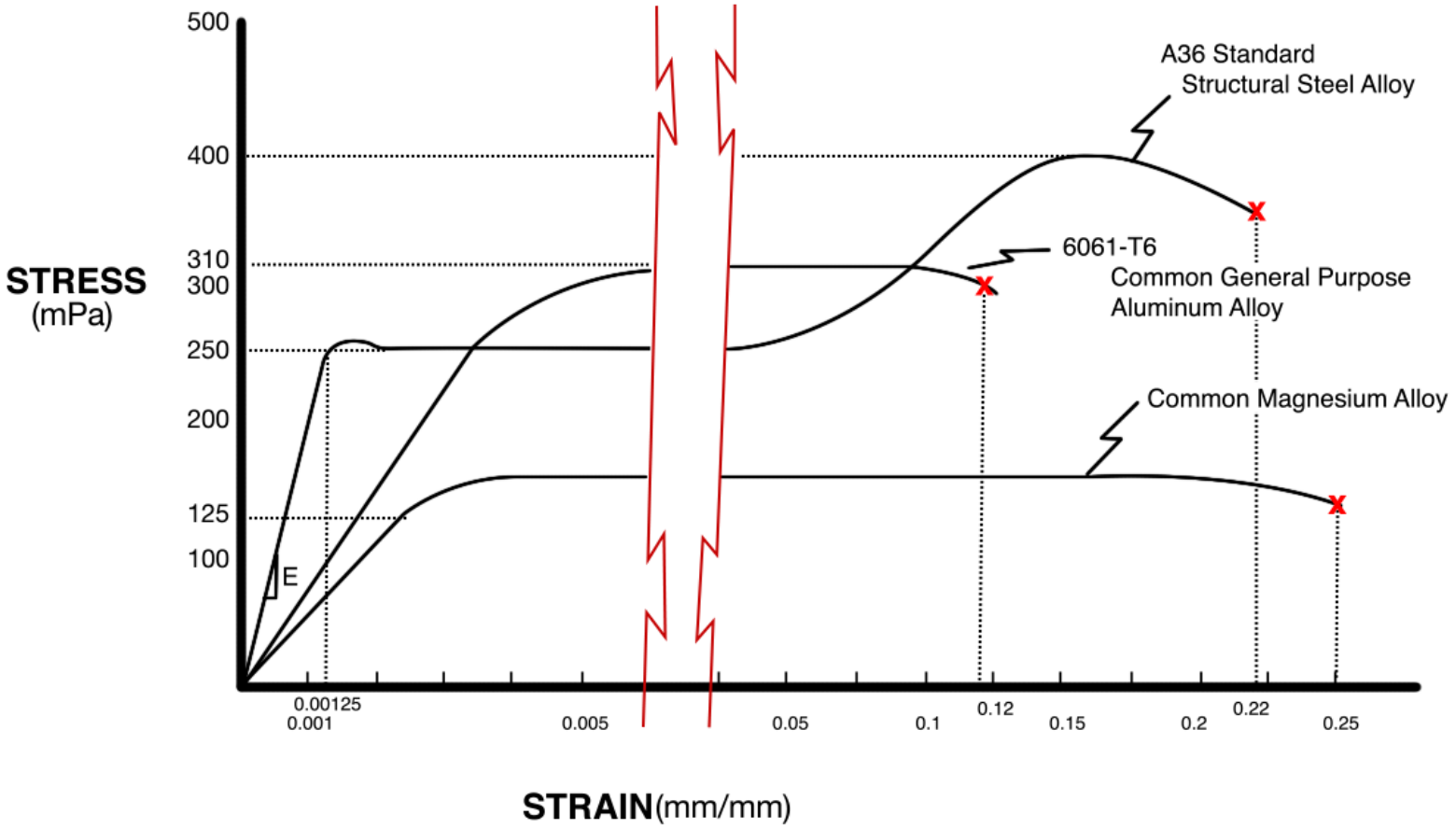
Worksheet solution



Worksheet solution:

1) What is the approximate Modulus of Elasticity for A36 Steel? $E = \frac{\sigma}{\epsilon} = \frac{250}{0.00125} = 200{,}000\ MPa = 200\ GPa$ ANS

2) What is the approximate Ultimate Strength of A36 Steel? 400 MPa ANS.

3) What is the approximate Ultimate Strength of 6061-T6 Aluminum? 310 MPa ANS.

4) What is the approximate Proportional Limit of the common Magnesium Alloy? 125 MPa ANS

5) What is the approximate Yield Stress of the A36 Steel? 250 MPa ANS

6) Which of these material is the strongest? Why?
   (Aluminum) or Magnesium HIGHEST ULTIMATE STRESS ANS

7) Which is the most ductile material? Why?
   Steel or Aluminum or (Magnesium) HIGHEST ϵ ANS

8) Which is the most brittle material? Why?
   Steel or (Aluminum) or Magnesium LOWEST ϵ ANS.

9) Which material is the stiffest? Why?
   (Steel) or Aluminum or Magnesium HIGHEST E ANS.