Welding Theory Worksheet
*Book: Metalwork – Technology and Practice – Victor E. Repp - **Page 209-233** – Unit 26*

Name: _____ Block: _____ Date: _____

Definitions:
Fusion Weld:
_____

Pressure Welding:
_____

Spot Welding:
_____

Shielded Metal Arc Welding:
_____

Tungsten Inert Gas Arc (TIG):
_____

Direct Current (DC):
_____

Alternating Current (AC):
_____

Welding Arc:
_____

Electrode:
_____

Flux:
_____

Slag:
_____

Welding Beads:
_____

Gas Metal Arc Welding (GMAW) (MIG):
_____

Filler Rod:

_____

Tack Weld:

_____

Regulators:

_____

Describe (on the left) and draw (on the right) each of the 5 basic welding joints: (page 217)

Butt	
Tee	
Edge	
Lap	
Corner	

Describe the 3 types of oxy-acetylene flames (page 226)

Neutral Flame:

_____

Carburizing flame:

_____

Oxidizing flame:

_____

Draw a "satisfactory" oxy-acetylene weld and describe why it is good (page 229):

_____
_____
_____

Chapter Review Questions (page 233)

Please write answers on a separate piece of lined paper and staple to this sheet

1. Describe how a fusion weld is made.
2. What temperature can the oxyacetylene flame produce? Electric arc?
3. What is the difference between base metal and weld metal?
4. What tip size, regulator settings, and filler rod diameter should be used to weld 1/8" (3.2mm) thick steel?
5. Why is it necessary to use a gas pressure regulator on oxygen and acetylene tanks?
6. What kind of flame should be used to make most gas welds?
7. What is the purpose of a tack weld?
8. What can happen if the weld is made too slowly?
9. In what ways is the electric welding arc like the sun?
10. Why should a welder wear clothing without pockets or cuffs?
11. What is the purpose of the coating on arc-welding electrodes?
12. Are all E6013 electrodes the same? Why or why not?
13. During the electric welding process, why should regular safety goggles be worn as well as the welding helmet?
14. Describe the spot-welding process. What is it used for?
15. How does TIG welding differ from MIG welding?