

6. In welding, penetration is defined as how deep a weld extends into the material. For penetration to happen heat must be transferred to the metal for an extended period of time. Of these 3, which would have the *worst* penetration?
7. What could be some potential issues that could happen as a result of welding too slow and having too much penetration? Hint: Remember it is heat that causes penetration.

### Part II: Types of Welds

> Read the definition of each weld and then match each picture to its corresponding definition.  
Hint: Parallel means the pieces are side by side, perpendicular means that are going in different angles that form a 90 degree corner when connected. The face of a material is large, the edge is the small side.

- Butt Weld- Weld where 2 pieces of material are parallel and touching and then welded where the faces connect.
- Corner Joint- Weld where 2 pieces of material are perpendicular but not touching and are welded on their edge
- Edge Joint- Weld where 2 pieces of material are parallel and touching and then welded where the edges connect.
- Fillet Weld- Weld where a standing piece is held perpendicular on top of a base piece in the shape of an upside down T
- Lap Joint- Weld where a piece of material overlaps another and is then welded on the edge of one material and face of another

