If a force if 29079 lbs is required to punch a round hole 1.1 inches in diameter, how much stress is developed in the punch?

Use the definition of stress to solve this problem. The area is the are of the punch cross section.

Enter your answer in KSI to the nearest whole number.

Match the following:

A _______ load is a force that tends to produce a sliding failure on a material along a plane that is parallel to the direction of the force. Choose...

- Choose...
- Compressive
- Shear
- Tensile
- Torsional

A ______ load is an outward or pulling action along the length of a component.

A ______ load is an inward or pushing action along the length of a component. Choose...

A ________ load produces a twisting action. Choose...

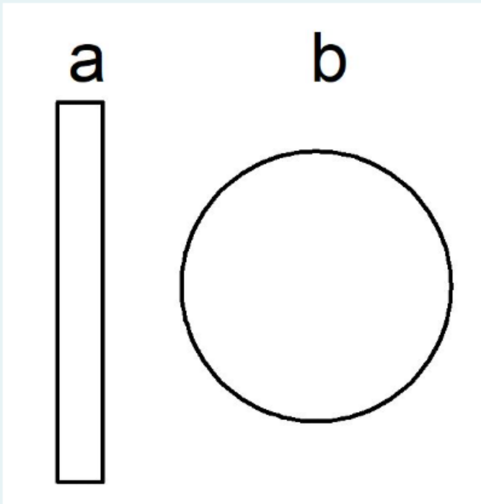
_________is the process used to shear coils of sheet metal to width.

This process combines stamping and cold extrusion. Triple-action presses combined with specially designed tooling produce parts impossible to make with any other stamping process. Eliminates the fracture ("breakout") zone of the punch. Creates parts with higher quality edges than punching.

A typical ________ punch press has a choice of up to 60 tools in a cylindrical tool changer that can be rotated to bring any tool to the punching position. Used to punch a variety of hole shapes and forms in any 2D position on a flat sheet of metal.

The perimeter of the rectangle below has the exact same length as the circumference of the circle. The area of the circle is greater than the area of the rectangle.

The thickness and strength of the of the material is the same.



The stress developed in the rectangular punch will be greater. Choose...

The rectangle will require more force to punch. Choose...

The circle will require more force to punch. Choose...

A certain material is 0.19 inches thick has a Maximum UTS of 80 KSI

A square hole with 1.36 inch side to be punched.

Using the formula F = 0.7(t)(L)(UTS), determine the force required to punch the hole.

Enter your answer in kips to the nearest integer value.

What is the length of the bend allowance of a sheet metal bend with the following parameters:

Bend Angle: 90°
Internal Radius: Equal to material thickness
Material Thickness: 0.186 inches
Bend Constant: 0.4

Give your answer in inches to the nearest three decimal places.

$$\frac{\theta\pi}{180}(Kt + r)$$

Determine the force required to punch a 2.8 inch diameter round hole in a material that is 0.4 inches thick, with an ultimate tensile strength of 61380 pounds per square inch.

Enter your answer in tons to the nearest whole number. 1 ton = 2000 pounds.

Use the formula below:

$$F = 0.7\ t\ L(UTS)$$

Notice that you will need to calculate L from the information given.