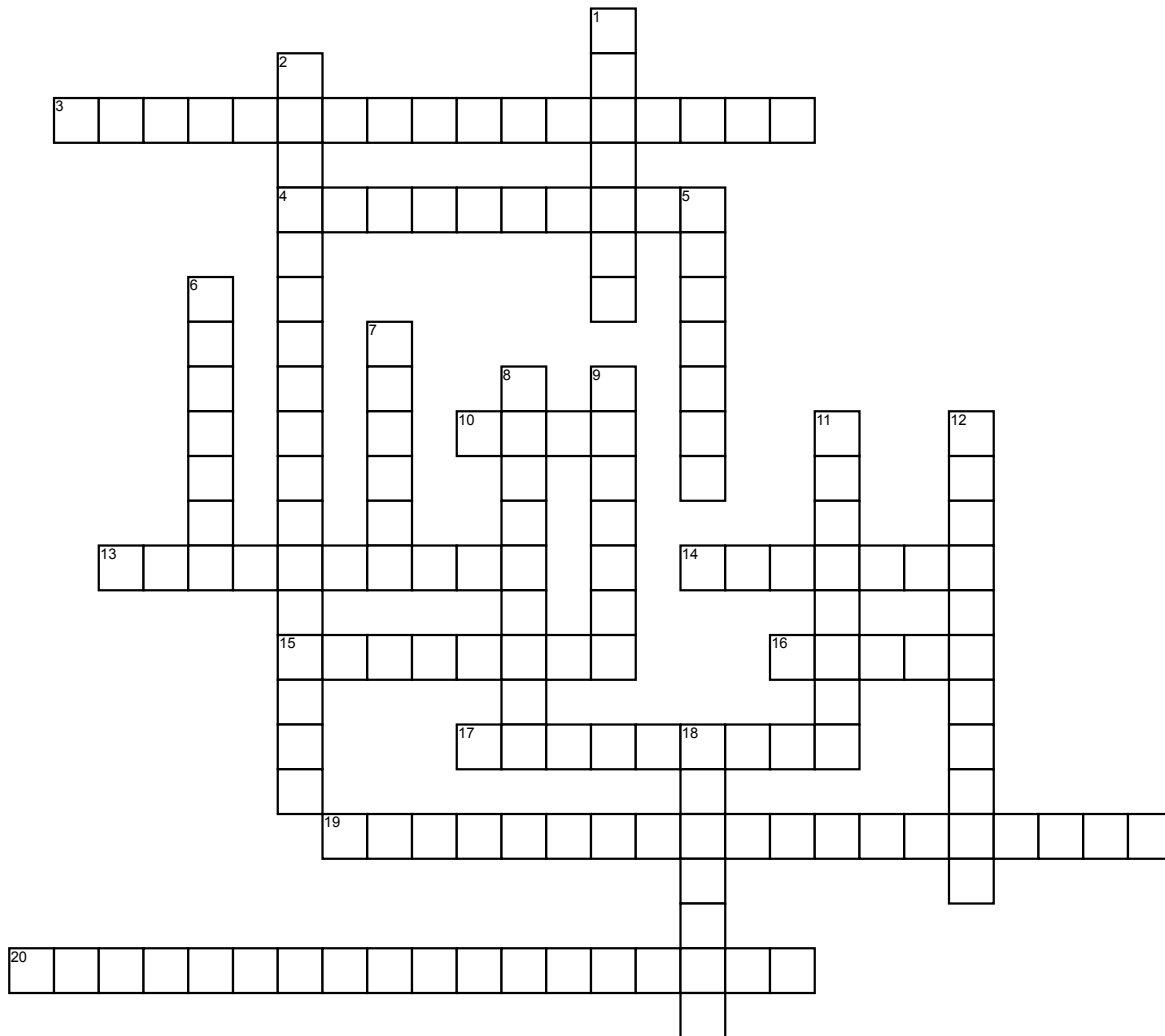


# Nutcracker Design



## Across

- 3.** this is cut by using a die stock and die together to form a thread on a circular bar of material
- 4.** The study of the physical relationship between people and their working and living environment (Using anthropometric data an ergonomist will design products that will improve a person's working and living environment.)
- 10.** used to produce a smoother finish by removing small amounts of metal
- 13.** Metals that don't contain iron
- 14.** used for cutting and enlarging holes sheet metal
- 15.** have two points, one placed in the indentation to produce a circle, arc on the surface

- 16.** an accurate machine that uses single point tools to remove metal from work
- 17.** a hole that does not go all the way through a piece of metal
- 19.** Method of drawing 3D shapes using lines that are 30° to the horizontal.
- 20.** for a design to be ergonomically correct sizes and measurements necessary for the use of the design must be collected and analysed before used in the design

## Down

- 1.** a joining process for metals where the filler has a melting temperature above 450C
- 2.** using a pre sized hole, taps are used with a tap wrench to cut an internal thread capable of taking a screw, stud or other pre-cut externally threaded material

- 5.** What is used to mark lines on steel?
- 6.** Wearing away of a surface from wind, water or usage.
- 7.** An alloy of copper and zinc, melting point at 880°
- 8.** ferrous metal containing 0.1 – 0.3 % carbon
- 9.** metals that contain iron
- 11.** to employ force using a pivot against a load (ie bottle opener jaws gripping on a bottle top)
- 12.** hit with a hammer to create a small indentation in the work surface
- 18.** are used to cut metal