

No Calculator – 20 Minutes Timed

Find the answer key at www.AlgebraNinja.com

Name: _____ Hour: _____

TMT Science 20 ACT Prep V1

- List the particles that make up the nucleus of an atom.
- The color of tree bark has changed to suit an environment. As a result, insects of a prior color that make use of camouflage die out, leaving the insects whose coloring matches the new tree bark color. This is due to what evolutionary phenomenon?
- Which is more dense: water or vegetable oil?
- In a plant cell, what is the organelle that helps with the process of photosynthesis (converting light into energy)?
- Given the following information from the period table, how many neutrons does Oxygen have?

- In a freezer, the water in a bowl turns to ice. What must be the absolute highest temperature in the freezer (in °C)?
- A penny is released off of the roof of the school building. Before it starts to drop, does it have more kinetic or potential energy?
- How long does it take the Earth to orbit the Sun?
- When an atom gains or loses an electron, it becomes positively or negatively charged as a result. When this occurs, what is this type of atom called?
- In the following chemical reaction formula, name one of the reactants: $2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$
- Which organelle undergoes cellular respiration, creating energy-rich molecules (or power) for the cell?
- How is it possible for two brown-haired parents to biologically have a blond-haired child, knowing blond hair is a recessive trait?
- Fill in the blank: Transcription is a process where the DNA of a gene is copied by _____.
- Between a molecule of bleach (NaClO) and a molecule of table salt (NaCl), which has more mass?
- A proton and an electron are shot towards each other. What will happen as they get close to each other?
- Considered the brain of the cell, which organelle contains a cell's DNA and helps to control movement and eating?
- Students are trying to determine whether winds at various speeds will affect how far a thrown paper airplane will fly. Describe a possible control group for this experiment.
- Give an example of a liquid with a neutral pH.
- A person's mass is 54.4 kg, while their weight is 533 N on Earth. If this person were to travel to the moon, which of these measurements would remain the same?
- A certain organelle uses a process called translation to transfer RNA to synthesize proteins. Which organelle is this?