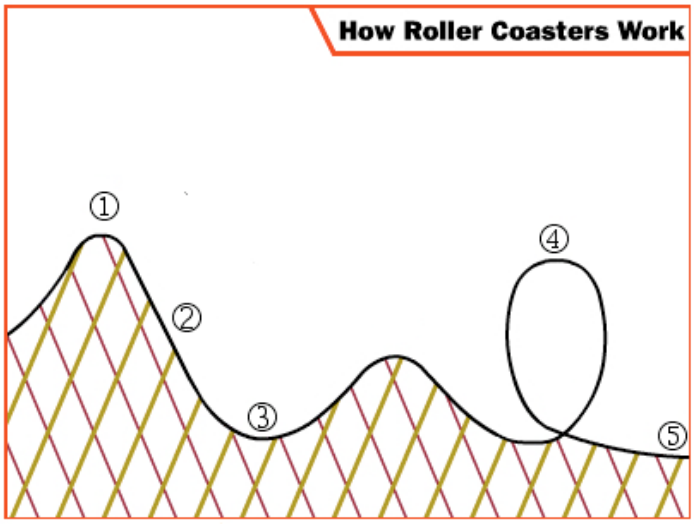
School _____ Grade Level ____ Name _____

Physics of Roller Coaster Design Challenge - Pre Test

1. Compare and contrast the concepts of Kinetic Energy and Potential Energy. Give examples in words, drawings, or both.

2. A roller coaster's energy is constantly changing between potential and kinetic energy.



Which number represents where potential energy is the greatest? _____The least? _____

Which number represents where kinetic energy is the greatest? _____The least? ____

Where does potential energy approximately equal kinetic energy? _____

3. Does an automobile consume more fuel when its air conditioner is turned on? When its lights are on? When its radio is on while it sitting in the parking lot? Explain your answers.