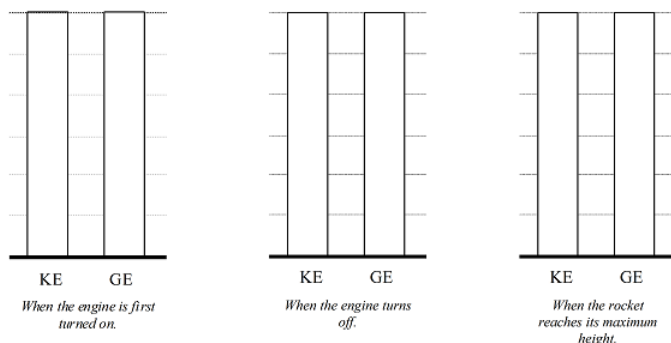


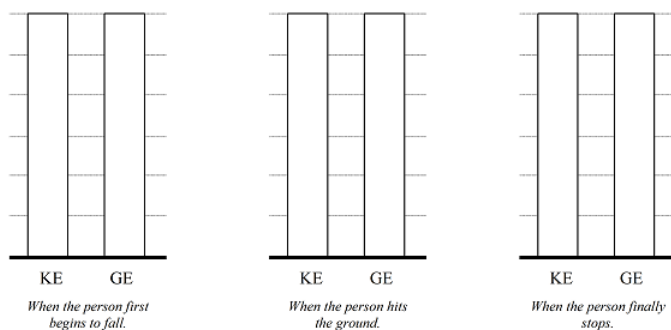
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For each of the scenarios described below, indicate the amount of kinetic energy and gravitational potential energy of the object at each of the events listed. Use a consistent scale throughout each motion. Set the lowest point of the motion as the zero-point of gravitational potential energy

a. A 4000 kg rocket's engine produces a thrust of 70,000 N for 15 s. The rocket is fired vertically upward.



b. To practice falling, a 55 kg pole-vaulter falls off of a wall 6.0 m above a 2.0 m thick foam cushion resting on the ground. However, he misses the cushion. The pole-vaulter sinks about 0.10 m into the ground before stopping.



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