MATHCOUNTS® Problem of the Week Archive

Hot Shot! – January 11, 2021

Problems

Hot Shot is an arcade basketball game in which the object is to make as many baskets as possible within the 60-second time limit. A player is awarded 2 points for each successful shot during the first 50 seconds of play and 3 points per successful shot during the final 10 seconds. Tyler had a bit of beginner's luck in her first game scoring a total of 60 points. She wants to exceed this total in her second game. What is the minimum number of baskets Tyler must make to earn a score greater than 60 points?

Mitchell earned a total score of 55 points. Twenty percent of the baskets he made were worth three-points each. If four-fifths of the two-point baskets Mitchell attempted were successful and he made one-third of the three-point baskets he attempted, what is the total number of baskets that Mitchell attempted?

Kyoka holds the world record for earning the most points in this arcade game with a high score of 256 points. If Kyoka did not miss any of the 114 shots she took to set this record, what percent of those shots were made during the final 10 seconds of the game? Express your answer to the nearest percent.