The PuzzlOR

Decision Support Puzzles for Applied Mathematicians

Puzzles

December 2014 (Electrifying) October 2014 (Fighters) August 2014 (Good Burger) June 2014 (Frog and Fly) April 2014 (Spy Catcher) February 2014 (Pizza Delivery) December 2013 (Golf Queuing) October 2013 (Chutes and Ladders) August 2013 (Urban Planning) June 2013 (Self Driving Cars) April 2013 (Subs vs. Battleships) February 2013 (Chandelier Balancing) December 2012 (Cookie Bake Off) October 2012 (FarmOR) August 2012 (Combination Locks) June 2012 (Lost at Sea) April 2012 (McEverywhere) February 2012 (Popsicle Scheduling) December 2011 (Dice Game) October 2011 (Movie Stars) August 2011 (Logical Hospital) June 2011 (Matchmaker) April 2011 (Choose Your Crew) February 2011 (Best Host) December 2010 (Miniopoly) October 2010 (Home Improvement) August 2010 (Relief Mission) June 2010 (SurvivOR) April 2010 (Patient 21) February 2010 (Planet Colonization) December 2009 (Fish Finder) October 2009 (Connected & Infected) August 2009 (Bridges) June 2009 (Grocery Queuing) April 2009 (Dance Scheduling) February 2009 (Supply & Demand) December 2008 (5x5 Poker) October 2008 (3DPP) August 2008 (Markov's Prison) June 2008 (TSP) April 2008 (Scheduling) February 2008 (Decision Trees)

Analytics Treasure Hunt 2012

About the PuzzIOR

October 2014 - Fighters



Four different fighters are having an all-out battle to determine who among them is the strongest. The image above shows those four fighters: Allan, Barry, Charles, and Dan.

Each fighter has varying attack and health abilities. At the start of the battle, they have differing health points: Allan has 10, Barry has 12, Charles has 16, and Dan has 18. Also, each fighter has differing attack points: Allan has 4, Barry has 3, Charles has 2, and Dan has 1.

The battle takes place over multiple rounds, each round consisting of a single attack. In each round, one random attacker and one random defender are chosen. When the attacker attacks a defender, the defender loses health points in the amount equivalent to the attacker's attack points. For example, if Allan is the attacker and Barry is the defender, Barry would lose 4 health points.

The fighters continue to randomly attack and defend in subsequent rounds until there is only one fighter left, who is then declared the winner. A fighter is removed from the battle when his life points become zero (or less).

Question: Which fighter is most likely to win the battle?

Send your answer to puzzlor@gmail.com by December 15th, 2014. The winner, chosen randomly from correct answers, will receive a \$25 Amazon Gift Card. Past questions can be found at puzzlor.com.

