

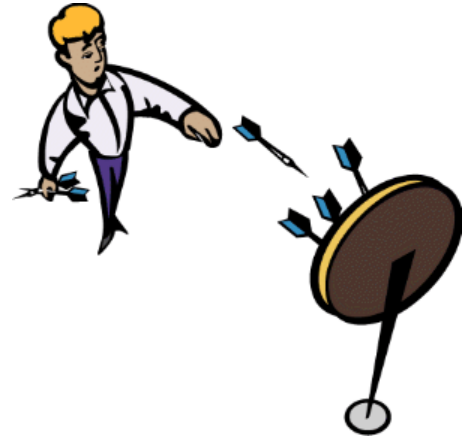
Name \_\_\_\_\_

Date \_\_\_\_\_

## Analyzing Probabilities and Decisions - Independent Practice Worksheet

Complete all the problems.

1. A lawn jarts team has choice of hitting a short field bonus throw or long zone bonus. 1 point is for the short field hit and getting the ball in the long zone is worth 2 points.



The coach tracked the statistics of using attempt strategies. :-

Short Field (1 point) = 85.8%

Long Field (2 points) = 64.2%

If the team gets 10 chances to score this season, which strategy would result in statistically the most points?

2. A car company finds a major defect in their vehicle that results in the car's engine bursting into flames during operation. As the CEO of the company you must make a decision entirely based on the most cost effective method of fixing this problem. Your company sold 826,723 of these cars. You could:

a) Recall all the cars and fix the problem. The financials behind this method include:

- The cost to fix the cars would be \$832 per car.
- The cost to contact customers to make the fix would be 51 cents per customer.
- A \$350,000 fine by the government for issuing a recall.
- In all recall situations, only an average of 81.6% of customers actual have the car serviced for the recall.

b) You could just defend your company against law suits brought on by individuals in a class-action law suits.

The financials behind this method include:

- 1) An industry average of 49.2% of customers that are part of the active plaintiffs.
- 2) 2.5 million dollars for legal fees.
- 3) An average award of \$483 per plaintiff.
- 4) An average cost of legal fees of \$52 per defendant. This will be required.

