

Areas of Knowledge: Mathematics and Ethics

Knowledge Question: Does knowledge come with responsibility?

I. Brainstorm and Answer

Make a list of businesses, industries, or people who profit from taking advantage of people's misunderstanding of probability and numbers.

II. Discuss

III. Probability, Fair Games, and Expected Value

List and discuss various games and their odds.

Is it unethical to profit from games that have guaranteed negative expected values?

Reflection:

Is it unethical for governments to run and promote lotteries?

Where does lottery money go?

In NY

- 30% to schools directly
- 50-60% to the winner
- 4% to run the lottery
- 6% to the store
- of the 60% won, 50% or so is taken in taxes after that.

How much of the original amount gambled? If they take in \$100,000,000 in tickets, you end up with \$30,000,000 going out in prize money. So you get back \$0.30 for each \$1 gambled essentially.