C2 Probability & Odds

- Calculate the odds for or against an event
- Switch between probability and odds for an event
- Explain the difference between probability and odds

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Warm Up - Calculate Probability

For the grand opening of her coffee shop, Maria is having a promotion. Each customer who makes a purchase gets a scratch-and-win card. Each card has a 50% chance of being a winner. Suppose a customer has three scratch-and-win cards.

a) What is the probability of all three cards being winners? (MathAltWork12 pg. 26)

Odds Investigation

Odds are another way to measure the likelihood of something happening.

Explore odds by completing the "Odds Investigation handout"

Odds: a ratio that compares the # of possible successful outcomes to the # of possible unsuccessful outcomes.

(Odds = # successful outcomes : # of unsuccessful outcomes)

Example: When rolling a six-sided die, the odds of rolling a 4 are 1:5.

1 successful outcome: 5 unsuccessful outcomes

Review the Odds Investigation Handout

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Example

A standard deck has 52 cards. What are the odds of choosing

a) the 7 of spades?

b) a queen?

c) a club?

d) a red card?

Practice (Board Work)

You have one six-sided die. What are the odds of rolling

a) a 2?

b) a 5 or a 6?

c) an odd number?

d) any number but a 3?

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Practice (Independent)

Text pg. 27-29:

Try It - #3-4;

Apply It - #5;

Work With It - #1, 3-4

Discuss It - #6-8