C4 Working with Probability

- solve problems involving probability.

Precision and Probability

You work at a factory that makes CFLs (compact fluorescent lights). You analyze a recent batch of a new type of bulb. Your analysis shows that the number of defective light bulbs in the batch is about 1 in 36.

a) Express the defect rate as a percent to five decimal places and to the nearest percent.

b) Your plant makes 1 000 000 of the light bulbs. Using the two defect rates from part a), calculate the potential number of defective light bulbs. What is the difference between the two results?

c) Which degree of precision do you think the manager of the factory would want to see?

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Lumberyard

Jay is ordering boards from a lumberyard. About 1 in 7 boards at the lumberyard are warped.

a) What percent of the boards are warped? Express your answer to five decimal places and to the nearest percent.

b) Jay orders 300 boards from the lumberyard. Using the two defect rates from part a), calculate the potential number of warped boards Jay will receive. What is the difference in the two results?

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Practice

Text pg. 46-48
- Try It - #1, 2, 4, 5
- Apply It - #8, 9a

Text pg. 50-53
- Try It - #3
- Apply It - #5, 6
- Discuss It - #3, 5, 6