

3-16-17

Aim: SWBAT get introduced to probability.

Do Now: Check hw ws

HW: Quiz tomorrow

Name _____ Class _____ Chapter 10 Problem Solving

Using Percents

Solve.

1. Judy Adler is saving money for a trip that will cost \$1000. She has had \$800 in the bank for a year at 7 1/2% annual interest. Does she have enough money for the trip? If not, how much more does she need?

$I = PRT$
 $I = (800)(0.075)(1)$
 $I = \$60$
 Total = $\$800 + \$60 = \$860$
 $\$1000 - \$860 = \$140$
 No, she needs \$140 more.

2. Sam Herman wants to put a new roof on his house. He plans to borrow the \$1500 it will cost. The bank will charge 18 1/2% annual interest for two years. How much will Sam have to pay back?

$I = PRT$
 $I = (1500)(0.185)(2)$
 $I = \$555$
 Total = $\$1500 + \$555 = \$2055$
 Sam must pay back \$2055.

3. Marvin is borrowing \$600 from his father for 2 1/2 years. His father is charging him 5% annual interest. What will Marvin owe his father?

$I = PRT$
 $I = (600)(0.05)(2.5)$
 $I = \$75$
 Total = $\$600 + \$75 = \$675$
 Marvin owes \$675.

4. Mr. Alexander borrows \$1450 from a bank at 17 1/2% annual interest for 3 1/2 years. Is \$2300 enough to pay back the loan?

$I = PRT$
 $I = (1450)(0.175)(3.5)$
 $I = \$888.125$
 $I = \$888.13$
 Total = $\$1450 + \$888.13 = \$2338.13$
 No, \$2300 is not enough.

5. Sally is saving money for a new car. She has had \$6540 in a savings account for 1 1/2 years earning 7 3/4% annual interest. Does she have enough to purchase a \$7295 car?

$I = PRT$
 $I = (6540)(0.0775)(1.5)$
 $I = \$760.275$
 $I = \$760.28$
 Total = $\$6540 + \$760.28 = \$7300.28$
 Yes, she can purchase the car.

6. Phyllis is borrowing \$1200 for college tuition from her grandmother at 6% annual interest for two years. If Phyllis wants to repay the loan in 12 equal payments, how much would each payment be?

$I = PRT$
 $I = (1200)(0.06)(2)$
 $I = \$144$
 Total = $\$1200 + \$144 = \$1344$
 $\$1344 \div 12 = \112
 Each payment is \$112.

7. Mildred Fleeer borrows \$2500 from the bank at 16 1/2% annual interest. The loan is due in 2 1/2 years. Is \$3500 enough to repay the loan when it is due?

$I = PRT$
 $I = (2500)(0.165)(2.5)$
 $I = \$1031.25$
 Total = $\$2500 + \$1031.25 = \$3531.25$
 No, \$3500 is not enough.

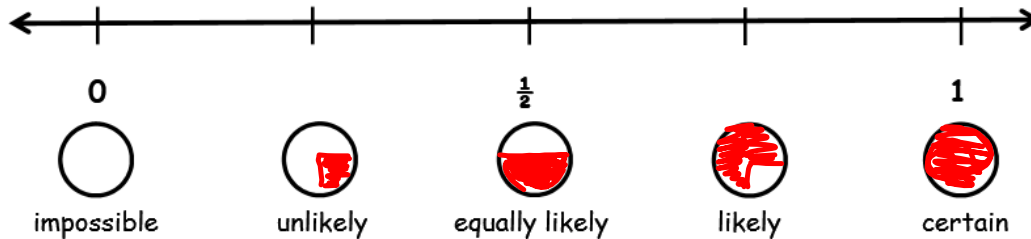
8. Sol Jimenez borrowed \$1100 to repair his car. He has a loan at 15 1/2% annual interest for 1 1/2 years. What will he owe when the loan is due?

$I = PRT$
 $I = (1100)(0.155)(1.5)$
 $I = \$255.75$
 Total = $\$1100 + \$255.75 = \$1355.75$
 Sol owes \$1355.75.

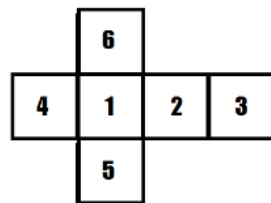
Introduction to Probability

Probability is the possibility that an event will occur.

Answers to probability questions can be described with words and/or numbers.



1. On a standard number cube, there are 6 **outcomes** or possible results of the **event** that can occur when it is tossed.



Outcome	Numbers that are part of the outcome	Probability
Number less than 10	1, 2, 3, 4, 5, 6	certain
Number 7		impossible
Even number	2, 4, 6	equally likely
Factor of 12	1, 2, 3, 4, 6	more likely than not
Number 5 or 6	5, 6	less likely than likely

2. The names Jessica, Joshua, Jill, and Jimmy are written on slips of paper. The slips of paper are placed in a bag. One name is picked.

Probability	Outcome
Impossible	choosing a name that doesn't start with J
Certain	choosing a J name
As likely as not	choosing a boys name
More likely than not	choosing a name with an I in it

Introduction to Probability

3. A bag has 24 marbles: 6 green, 6 red, and 12 blue. Lucy reaches into the bag and picks out 1 marble.

Probability	Outcome
Impossible	choosing a yellow marble
Certain	choosing green, red, or blue
As likely as not	choosing a blue
More likely than not	choosing a red or blue
Less likely than likely	choose a red

4. Imagine that these cards are face down, and you pick one.



Probability	Outcome
0	Picking a D
1	A, B, or C
$\frac{1}{2}$	Picking A
Between 0 and $\frac{1}{2}$	Picking B
Between $\frac{1}{2}$ and 1	Picking A or B

5. A weatherman in Seattle says there is a 75% chance of rain. A weatherman in Tacoma says there is a $\frac{1}{4}$ chance of rain. In which city is it more likely to rain? Explain how you know.

Seattle, because 75% is greater than 25%.

6. For each number shown, describe the probability in words.

0 _____

$\frac{7}{8}$ _____

$\frac{1}{3}$ _____

1 _____

$\frac{1}{2}$ _____