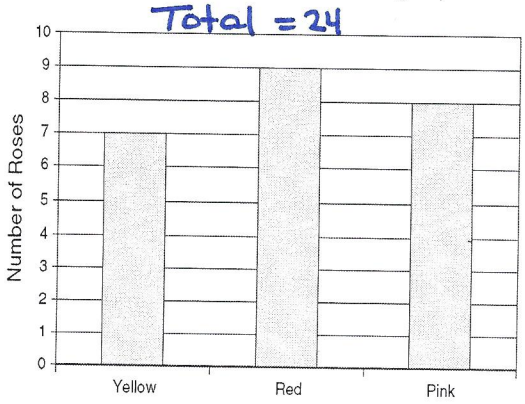
Accelerated Geometry CC
Module 7 Test Review

Name: KEY
Date: _____ Period: ____

1. A gardener has counted the number of roses he has of each color. The results are graphed below.

Total = 24



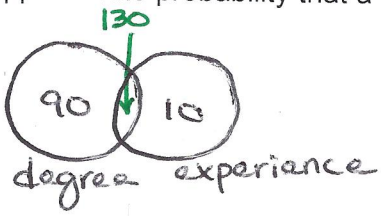
If a rose is picked at random, what is the probability that the rose is pink?

$P(\text{pink}) = 8/24 = 1/3$

2. Which is the probability two 1-6 number cubes land on an even number?

$P(\text{even and even}) = P(\text{even}) \cdot P(\text{even})$
Independent
$\frac{5}{10} \cdot \frac{5}{10} = \frac{1}{4}$

3. Of the last 230 new hires at a company, 220 had college degrees and 140 had prior experience. Only 10 new hires had prior experience without a college degree. What is the approximate probability that a new hire has a college degree but no experience?



P(degree but no experience) =
$\frac{90}{230} = \frac{9}{23}$

4. A company is testing a new method of manufacturing a part for their machines. They tested parts using the old and new methods.

What is the approximate probability that a part chosen at random from this group is new and passed the test?

$\frac{5}{60} = \frac{1}{12}$

Parts Performance by Age		
	New	Old
Passed	5	23
Failed	2	30

Total = 60

5. Use the two-way table (joint and marginal frequencies) from Question 4. What is the approximate probability that a part is old?

	New	old	Total
passed	.083	.383	.466
failed	.033	.5	.533
Total	.116	.883	1

P(old) = .883

6. What is the probability that a card drawn from a standard deck is black and a 10?

$P(\text{black and 10}) = P(\text{black}) \cdot P(10 \mid \text{black}) = \frac{26}{52} \cdot \frac{2}{26} = \frac{1}{26}$

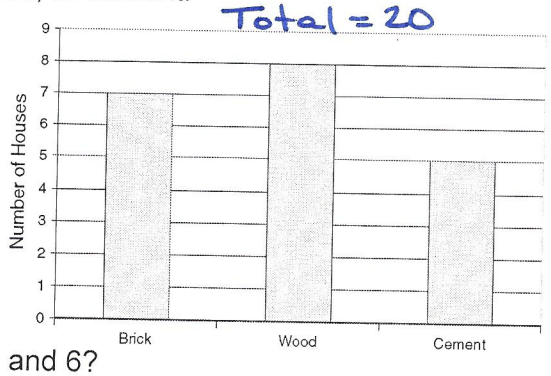
Make sure you look at everything....do not stop at this review. This is just extra!!!

Accelerated Geometry CC
Module 7 Test Review

Name: _____
Date: _____ Period: ____

7. In a new neighborhood, houses are constructed of brick, wood, or cement.

Total = 20



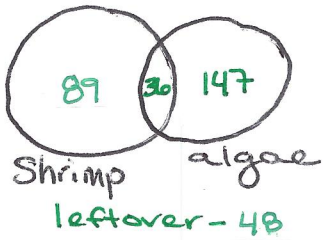
According to the graph above, what is the probability that a house chosen at random is made of brick?

$P(\text{brick}) = \frac{7}{20}$ or .35

8. What is the probability a 1-6 number cube lands between 1 and 6?

$P(\text{between 1 and 6}) = \frac{4}{6} = \frac{2}{3}$

9. A biologist has collected data from 320 tidal pools. 125 of the pools contained shrimp and 183 contained algae. There were 147 tidal pools that contained only algae. What is the probability that a tidal pool contains shrimp or algae?



P(shrimp or algae)

P(shrimp) + P(algae) − P(both)

$\frac{125}{320} + \frac{183}{320} - \frac{36}{320} = \frac{17}{20}$

10. The table shows the results of a consumer survey asking men and women where they prefer to shop.

What is the probability that a person chosen from this group is a male who prefers Store A?

$\frac{12}{36} = \frac{1}{3}$

Shopping By Gender		
	Male	**Female**
Store A	12	6
Store B	4	14

Total = 36

11. Use the two-way table (joint and marginal frequencies) from Question 12. What is the probability that a person prefers store A?

P(store A) = .5

	male	female	total
Store A	.333	.167	.5
Store B	.111	.389	.5
total	.444	.556	1

12. What is the approximate probability that a card drawn from a standard deck is a club and has a letter on it?

P(club and letter) = P(club) · P(letter | club)

$\frac{13}{52} \cdot \frac{4}{13} = \frac{1}{13}$

Make sure you look at everything....do not stop at this review. This is just extra!!!