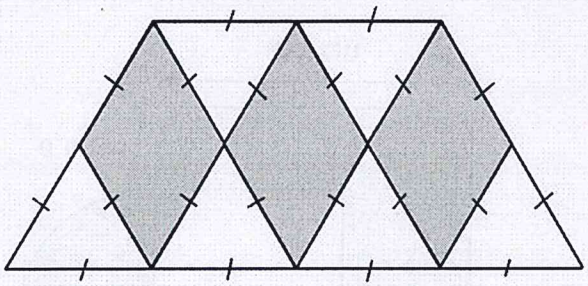
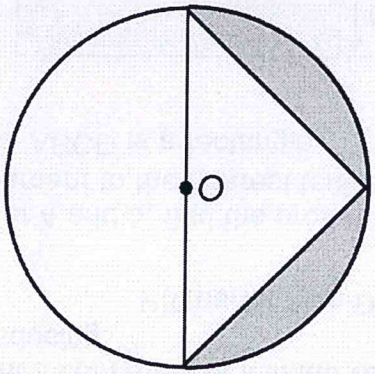
Bellwork Alg 2B Thursday, April 19, 2018

1. All the segments marked with tic marks are 5cm long. Find the probability that if you pick a point at random in the figure it will be in the Shaded Region. Give answer as a percent to the nearest tenth.



P(Shaded Region) =

2. The triangle is isosceles with its base passing through the center of Circle O. The radius of the circle is 20 cm. Find the probability that a point picked at random in the circle is in the shaded region. Give answer as a percent to the nearest hundredth.



P(Shaded Region) =

3. There are nine people participating in a raffe. Three $50 gift cards from the same store are to be given out as prizes. How many ways can the gift cards be awarded?

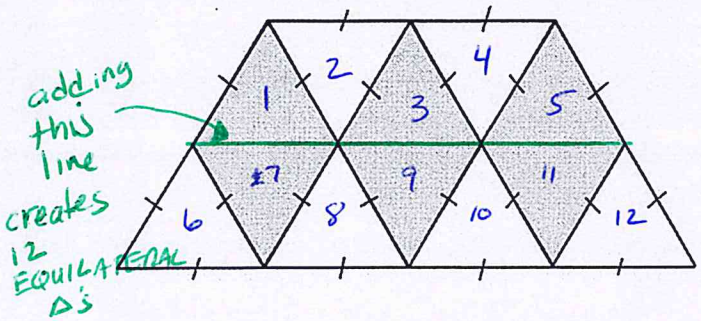
4. A multiple choice test contains five questions, and each question has four possible respones. How many different answer keys are possible?

5. How many different arrangements of the letters in the word ALLOWABLE are possible?

6. A crate of toy cars contains 10 working cars and 4 defective cars. How many ways can 5 cars be selected if only 3 work?

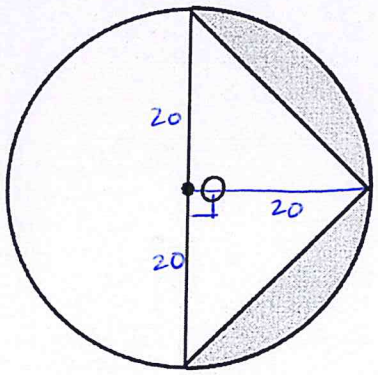
Bellwork Alg 2B Thursday, April 19, 2018 ANSWERS

1. All the segments marked with tic marks are 5cm long. Find the probability that if you pick a point at random in the figure it will be in the Shaded Region. Give answer as a percent to the nearest tenth.



P(Shaded Region) = $\frac{6}{12}$ = 50%

2. The triangle is isosceles with its base passing through the center of Circle O. The radius of the circle is 20 cm. Find the probability that a point picked at random in the circle is in the shaded region. Give answer as a percent to the nearest hundredth.



P(Shaded Region) = $\frac{200\pi - 400}{400\pi}$ = 18.17%

- Area of Target = $\pi(20)^2 = 400\pi$
- SHADED REGION = Semicircle − Δ

$\frac{400\pi}{2} - \frac{1}{2}(40)(20) = 200\pi - 400$

3. There are nine people participating in a raffe. Three $50 gift cards from the same store are to be given out as prizes. How many ways can the gift cards be awarded?

$_9C_3$ = 84

4. A multiple choice test contains five questions, and each question has four possible respones. How many different answer keys are possible?

$4 \cdot 4 \cdot 4 \cdot 4 \cdot 4 = 4^5 =$ 1024

5. How many different arrangements of the letters in the word ALLOWABLE are possible?

$\frac{9!}{2! \cdot 3!}$ ← 9 TOTAL LETTERS; 2 A's; 3 L's = 30,240

6. A crate of toy cars contains 10 working cars and 4 defective cars. How many ways can 5 cars be selected if only 3 work?

= 3 working cars AND 2 defective cars

= $_{10}C_3 \cdot {}_4C_2 = 120 \cdot 6 =$ 720