Algebra 2   Bellwork   Thursday, May 21, 2015

1. You go to a hardware story with a bolt but are missing the nut. In a bin at the store is a mixture of the following sized nuts:

18 $\frac{1}{4}$ inch nuts   17 $\frac{3}{8}$ inch nuts   and   9 $\frac{1}{2}$ inch nuts

You take one at random but it doesn't fit your bolt so you throw it back into the bin then you take another nut at random and see if it fits your bolt. Find each probability as a fraction.

a) P($\frac{1}{2}$ inch nut and $\frac{1}{2}$ inch nut)=

b) P($\frac{3}{8}$ inch nut and $\frac{1}{4}$ inch nut)=

2. You have a bag of balloons that contains 9 red, 5 gree, and 6 blue balloons. You take a random balloon and blow it up. Then you take another balloon at random and blow it up. Find each probability as a fraction.
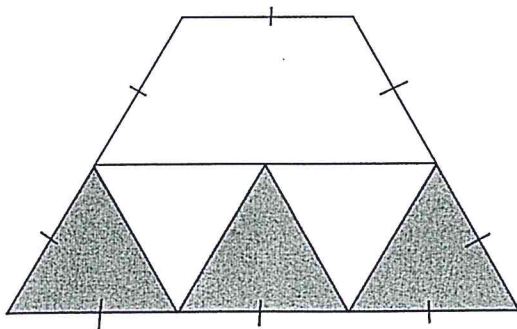
a) P(green and red)=

b) P(blue and blue)=

3. Find the probability of landing in the shaded region of the target. Give your answer as a percent rounded to the nearest hundredth.

16 cm

4. Find the probability of landing in the shaded region of the target. Give your answer as a percent rounded to the nearest hundredth.

1

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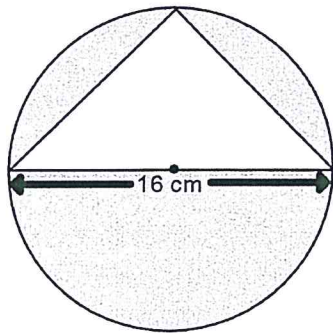
1. You go to a hardware story with a bolt but are missing the nut. In a bin at the store is a mixture of the following sized nuts:

18 $\frac{1}{4}$ inch nuts   17 $\frac{3}{8}$ inch nuts   and   9 $\frac{1}{2}$ inch nuts

44 TOTAL

You take one at random but it doesn't fit your bolt so you throw it back into the bin then you take another nut at random and see if it fits your bolt. Find each probability as a fraction.

INDEPENDENT

a) P($\frac{1}{2}$ inch nut and $\frac{1}{2}$ inch nut)=

$$\frac{9}{44} \cdot \frac{9}{44} = \frac{81}{1936}$$

b) P($\frac{3}{8}$ inch nut and $\frac{1}{4}$ inch nut)=

$$\frac{17}{44} \cdot \frac{18}{44} = \frac{306}{1936}$$

2. You have a bag of balloons that contains 9 red, 5 gree, and 6 blue balloons. You take a random balloon and blow it up. Then you take another balloon at random and blow it up. Find each probability as a fraction.
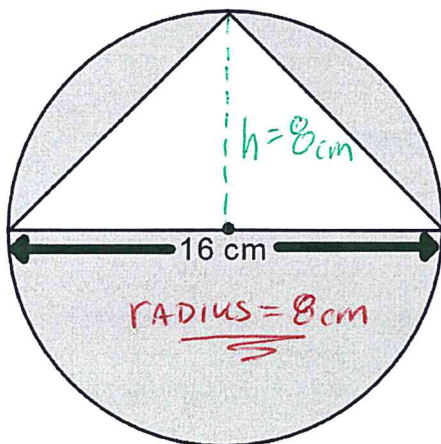
20 TOTAL   DEPENDENT

a) P(green and red)=

$$\frac{5}{20} \cdot \frac{9}{19} = \frac{45}{380}$$

b) P(blue and blue)=

$$\frac{6}{20} \cdot \frac{5}{19} = \frac{30}{380}$$

3. Find the probability of landing in the shaded region of the target. Give your answer as a percent rounded to the nearest hundredth.
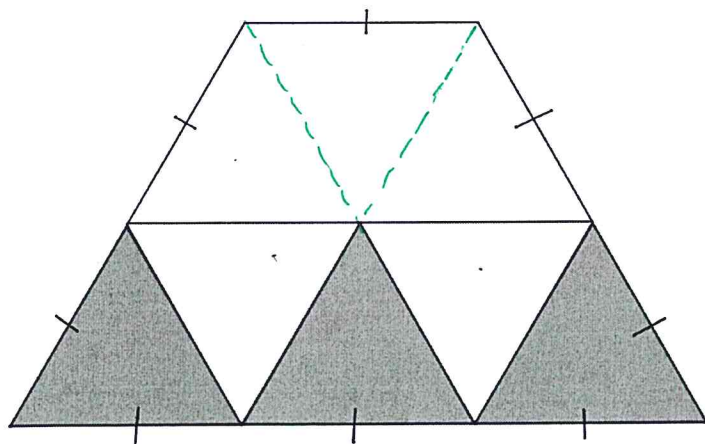
h=8cm
16 cm
rADIUS = 8cm

$$\frac{CIRCLE - \triangle}{CIRCLE} = \frac{64\pi - 64}{64\pi}$$

Area of circle : area of $\triangle$:

$= \pi(8)^2$ $= \frac{1}{2}(16)(8)$

$= 64\pi \ cm^2$ $= 64 \ cm^2$

$= 68.17\%$

4. Find the probability of landing in the shaded region of the target. Give your answer as a percent rounded to the nearest hundredth.

$$\frac{3}{8} = 37.50\%$$

1