2nd|3rd Bellwork Hon Alg 2 Wednesday, March 29, 2017

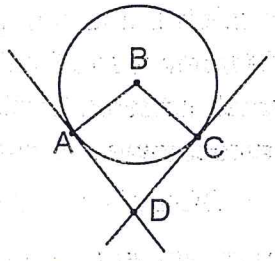
1. You are going away for a weekend to the cottage. You packed 3 pairs of shorts, 5 shirts, and 2 hats. How many different outfits can you make if an outfit consists of a pair of shorts, a shirt, and a hat?

2. You have four pieces of fruit to blend into a smoothie. But the blender can only hold three of the pieces of fruit. How many different smoothies can you make using three of the four pieces of fruit?

3. You have four framed pictures you would like to hang up in your house. One of your walls can hold only three pictures. How many ways can you arrange three of the four pictures on that wall?

Reminder for #'s 4 & 5: A radius drawn to the point of tangency is perpendicular to the tangent line.

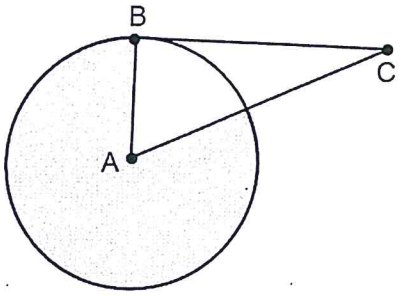
4. In the figure at the right, DA and DC are tangent to the circle with center B at points A and C, respectively. If $\angle ABC = \frac{2}{7} \cdot \angle ADC$, what is the degree measure of $\angle ADC$?



Note: Figure not drawn to scale.

A. 40 B. 51 C. 129 D. 140 E. 154

5. The circle to the right with center A has an area of 21. BC is tangent to the circle at pt. B. If AC = 2AB, what is the area of the shaded region?



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1. You are going away for a weekend to the cottage. You packed 3 pairs of shorts, 5 shirts, and 2 hats. How many different outfits can you make if an outfit consists of a pair of shorts, a shirt, and a hat?

30 OUTFITS

#shirts #shorts #hats
5 · 3 · 2 = 30

2. You have four pieces of fruit to blend into a smoothie. But the blender can only hold three of the pieces of fruit. How many different smoothies can you make using three of the four pieces of fruit?

Combination

$_4C_3$ → 4 smoothies

3. You have four framed pictures you would like to hang up in your house. One of your walls can hold only three pictures. How many ways can you arrange three of the four pictures on that wall?

Permutation

$_4P_3$ → 24 arrangements

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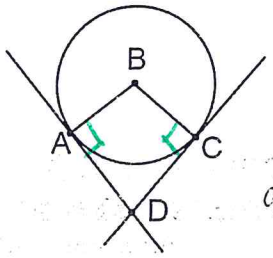

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A. 40 B. 51 C. 129 D. 140 E. 154

sum of interior ∠s of Quad ABCD = 360°
so, $\angle B + \angle D = 180$
and given $\angle B = \frac{2}{7}\angle D$

$\frac{2}{7}\angle D + \angle D = 180$
$\frac{7}{9} \cdot \frac{9}{7}\angle D = 180 \cdot \frac{7}{9}$
$m\angle D = 140$

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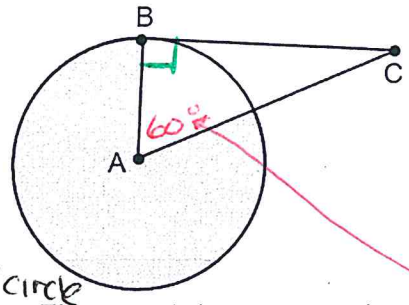

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shaded region must be $\frac{300°}{360°} = \frac{5}{6}$ of the circle

$\frac{5}{6} \cdot 21 =$ 17.5

if AC (hypot) = 2·AB (sL) then △ABC is a 30°-60°-90° △