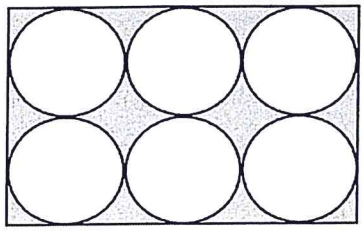
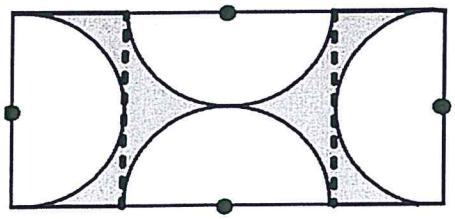
Bellwork Hon Alg 2 Monday, January 30, 2017

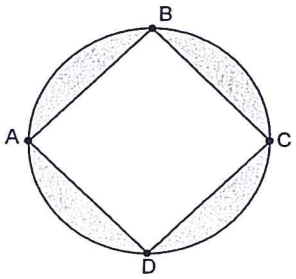
1. Find the area of the shaded region in this diagram.
The dimensions of the rectangle are 24x16.
Give answer in terms of π



2. Find the area of the shaded region in this diagram.
The diameter of each semicircle is 10.
Give your answer to the nearest hundredth.



3. What percent of the circle is shaded? Round to the nearest tenth. Points A, B, C, and D are equally spaced around the circle. The diameter of the circle is 12.



Bellwork Hon Alg 2 Monday, January 30, 2017 ANSWERS

1. Find the area of the shaded region in this diagram.
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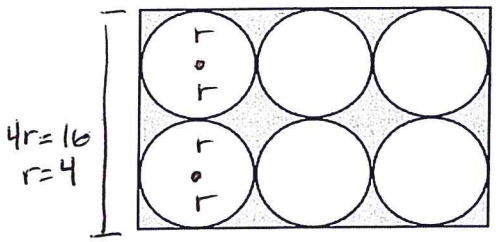

SHADED REGION = RECTANGLE − 6 circles

$(24)(16) - 6\cdot\pi r^2$

$(24)(16) - 6\pi(4)^2$

$384 - 96\pi$

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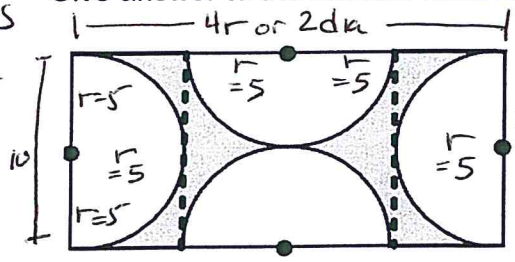
Give answer to the nearest hundredth.



SHADED AREA = RECT − 2 circles

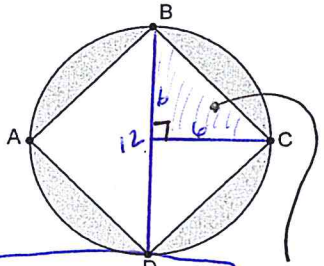
$(20)(10) - 2\pi(5)$

$200 - 50\pi$

$= 42.92$

3. What percent of the circle is shaded? Round to the nearest tenth. Points A, B, C, and D are equally spaced around the circle. The diameter of the circle is 12.

ABCD is a square



Area of the square = 4 · Δ's = 4(18) = 72

area of this Δ = $\frac{1}{2}(6)(6) = \frac{1}{2}(36) = 18$

shaded area = circle − square

$= \pi(6)^2 - 72$

$= 36\pi - 72$

% shaded = $\frac{\text{area of shaded}}{\text{TOTAL area}} \times 100$

$= \frac{36\pi - 72}{36\pi} \cdot 100$

36.3%