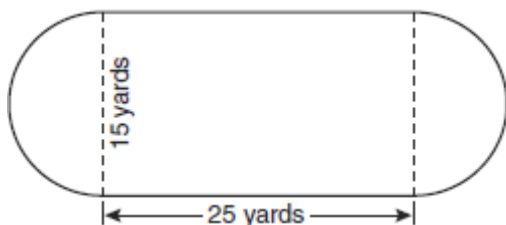


NAME: _____

1. 080924ia, P.I. A.G.1

A playground in a local community consists of a rectangle and two semicircles, as shown in the diagram below.

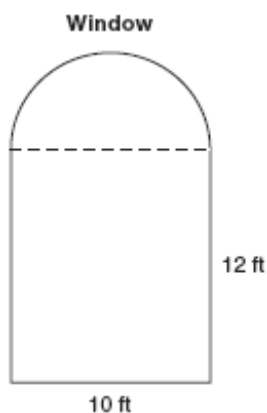


Which expression represents the amount of fencing, in yards, that would be needed to completely enclose the playground?

- [A] $30\pi + 50$ [B] $15\pi + 50$
 [C] $30\pi + 80$ [D] $15\pi + 80$

2. 010931ia, P.I. A.G.1

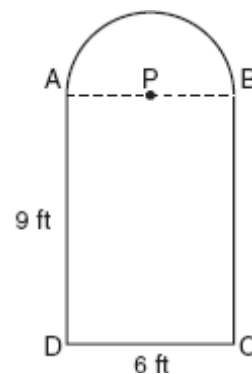
A window is made up of a single piece of glass in the shape of a semicircle and a rectangle, as shown in the diagram below. Tess is decorating for a party and wants to put a string of lights all the way around the outside edge of the window.



To the *nearest foot*, what is the length of the string of lights that Tess will need to decorate the window?

3. fall0733ia, P.I. A.G.1

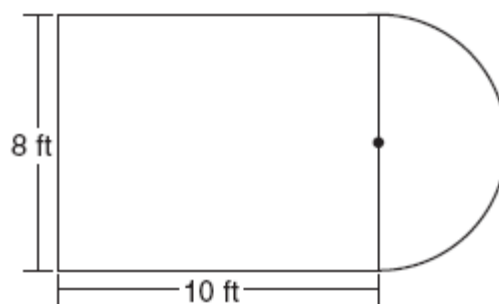
Serena's garden is a rectangle joined with a semicircle, as shown in the diagram below. Line segment AB is the diameter of semicircle P . Serena wants to put a fence around her garden.



Calculate the length of fence Serena needs to the *nearest tenth of a foot*.

4. 080815ia, P.I. A.G.1

Luis is going to paint a basketball court on his driveway, as shown in the diagram below. This basketball court consists of a rectangle and a semicircle.



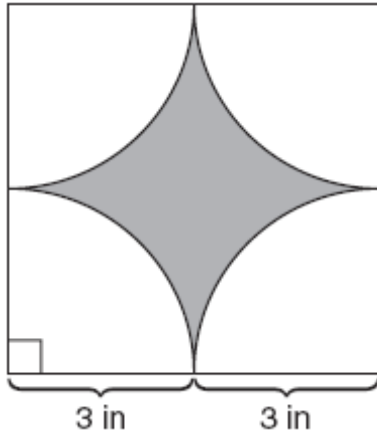
Which expression represents the area of this basketball court, in square feet?

- [A] $80 + 64\pi$ [B] 80
 [C] $80 + 16\pi$ [D] $80 + 8\pi$

NAME: _____

5. 060832ia, P.I. A.G.1

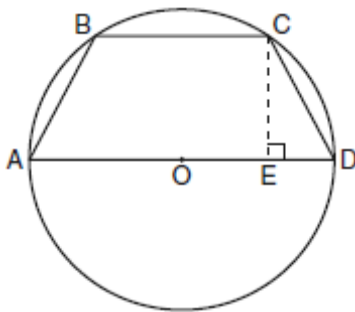
A designer created the logo shown below.
 The logo consists of a square and four
 quarter-circles of equal size.



Express, in terms of π , the exact area, in
 square inches, of the shaded region.

6. 060934ia, P.I. A.G.1

In the diagram below, the circumference of
 circle O is 16π inches. The length of \overline{BC} is
 three-quarters of the length of diameter \overline{AD}
 and $CE = 4$ inches. Calculate the area, in
 square inches, of trapezoid $ABCD$.



[1] B _____

[2] 50, and appropriate work is shown.

[1] Appropriate work is shown, but one computational or rounding error is made.

or [1] Appropriate work is shown, but one conceptual error is made,

or [1] 50, but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[2] incorrect procedure.

[2] 33.4, and appropriate work is shown.

[1] Appropriate work is shown, but one computational or rounding error is made.

or [1] Appropriate work is shown, but one conceptual error is made.

or [1] 33.4, but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[3] incorrect procedure.

[4] D _____

[2] $36 - 9\pi$ or $36 - 3^2\pi$, and appropriate work is shown.

[1] Appropriate work is shown, but one computational error is made.

or [1] Appropriate work is shown, but one conceptual error is made.

or [1] Appropriate work is shown, but the answer is not expressed in terms of π .

or [1] $36 - 9\pi$, but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[5] incorrect procedure.

[3] 56, and appropriate work is shown.

[2] Appropriate work is shown, but one computational error is made.

or [2] Appropriate work is shown to find

$$A = \frac{1}{2}(4)(12 + 16) \text{ or an equivalent equation,}$$

but no further correct work is shown.

[1] Appropriate work is shown, but two or more computational errors are made.

or [1] Appropriate work is shown, but one conceptual error is made.

or [1] Appropriate work is shown to find $AD=16$ and $BC=12$, but no further correct work is shown.

or [1] 56, but no work is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[6] incorrect procedure.