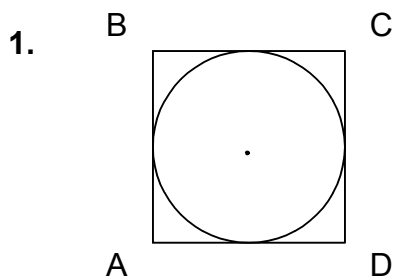


CAHSEE Mathematics

**Workbook**  
**Student Edition**

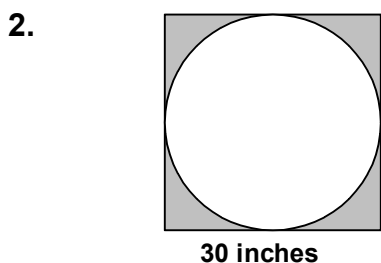
**S** *implified*  
*olutions*  
**For Math**

## CAHSEE Bench Mark Practice 21



In the figure above, the radius of the inscribed circle is 12 inches (in.). What is the perimeter of the square ABCD?

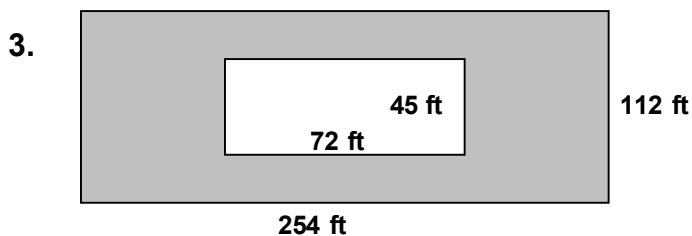
- a.  $48\pi$  in.                      b. 96 in.  
c.  $72\pi$  in.                      d. 48 in.



The largest possible circle is to be cut from a 30-inch square board. What will be the approximate area, in square inches, of the remaining board (shaded region)?

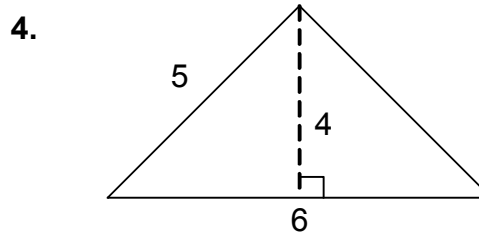
( $A = \pi r^2$  and  $\pi \approx 3.14$ )

- a. 190                                  b. 210  
c. 230                                  d. 250



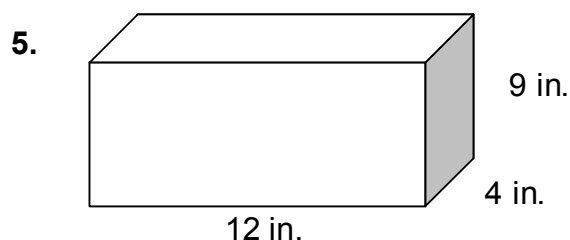
A rectangular pool 72 feet by 45 feet is on a rectangular lot 254 feet by 112 feet. The rest of the lot is grass. Approximately how many square feet is grass?

- a. 2,300                                b. 25,200  
c. 2,500                                d. 27,900



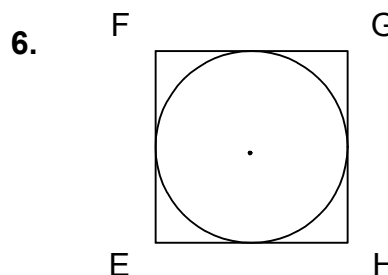
What is the area of the triangle shown above?

- a. 10 square units                  b. 12 square units  
c. 8 square units                    d. 6 square units



What is the volume of the box shown above in cubic inches ( $\text{in.}^3$ )?

- a. 25                                      b. 48  
c. 346                                    d. 432

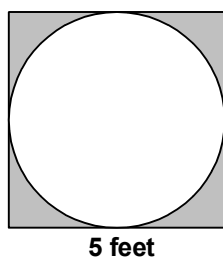


In the figure above, the radius of the inscribed circle is 18 inches (in.). What is the perimeter of the square EFGH?

- a. 144 in.                                b. 72 in.  
c.  $108\pi$  in.                            d.  $72\pi$  in.

## CAHSEE Bench Mark Practice 21

7.

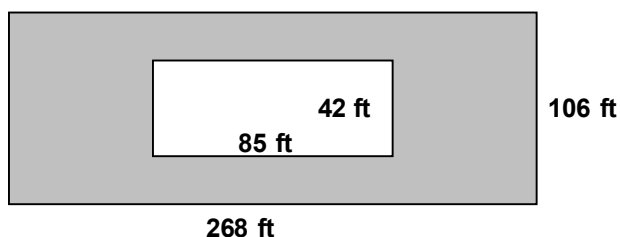


The largest possible circle is to be cut from a 5-foot square board. What will be the approximate area, in square feet, of the remaining board (shaded region)?

( $A = \pi r^2$  and  $\pi \approx 3.14$ )

- a. 3                                      b. 4  
c. 5                                      d. 6

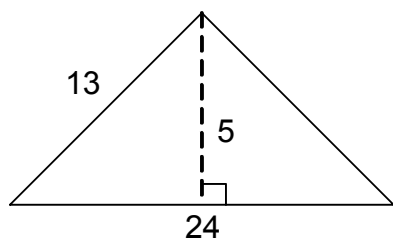
8.



A rectangular pool 85 feet by 42 feet is on a rectangular lot 268 feet by 106 feet. The rest of the lot is grass. Approximately how many square feet is grass?

- a. 24,800                                  b. 25,900  
c. 2,500                                    d. 2,900

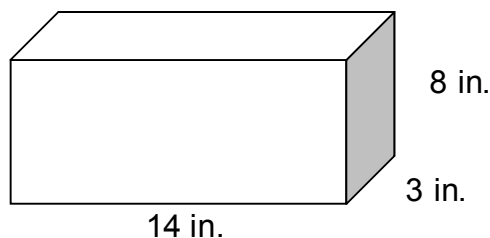
9.



What is the area of the triangle shown above?

- a. 42 square units                      b. 60 square units  
c. 312 square units                    d. 120 square units

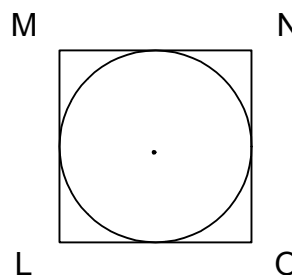
10.



What is the volume of the box shown above in cubic inches ( $\text{in.}^3$ )?

- a. 25    b. 126  
c. 123                                        d. 336

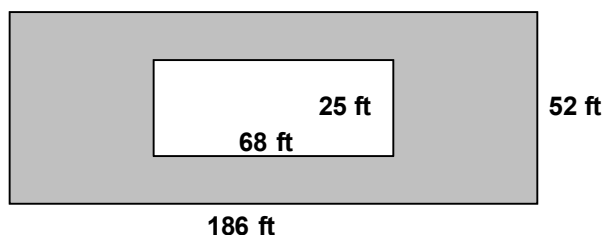
11.



In the figure above, the radius of the inscribed circle is 10 inches ( $\text{in.}$ ). What is the perimeter of the square LMNO?

- a.  $100\pi$  in.                                b.  $80\pi$  in.  
c. 100 in.                                    d. 80 in.

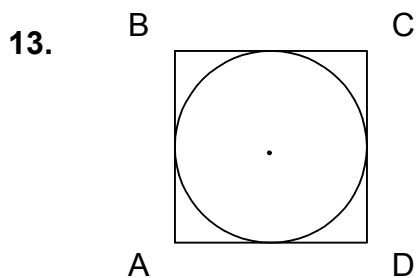
12.



A rectangular pool 68 feet by 25 feet is on a rectangular lot 186 feet by 52 feet. The rest of the lot is grass. Approximately how many square feet is grass?

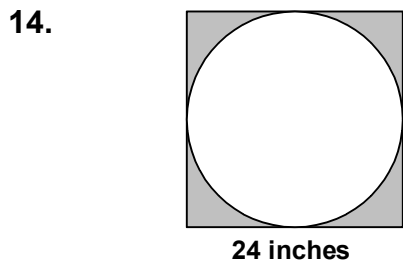
- a. 8,000                                      b. 26,000  
c. 6,500                                      d. 12,400

## CAHSEE Bench Mark Practice 21



In the figure above, the radius of the inscribed circle is 6 inches (in.). What is the perimeter of the square ABCD?

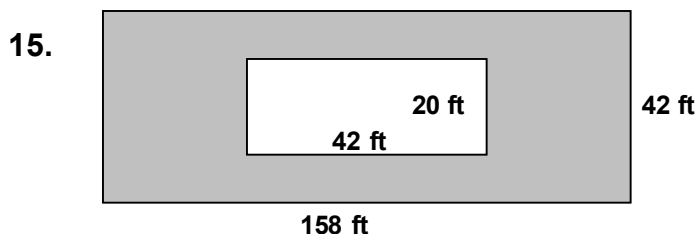
- a.  $48\pi$  in.                      b. 96 in.  
c.  $72\pi$  in.                      d. 48 in.



The largest possible circle is to be cut from a 24-inch square board. What will be the approximate area, in square inches, of the remaining board (shaded region)?

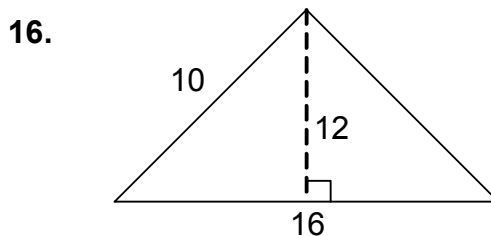
( $A = \pi r^2$  and  $\pi \approx 3.14$ )

- a. 124                                  b. 168  
c. 96                                  d. 110



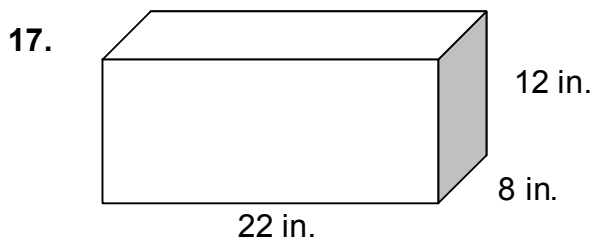
A rectangular pool 42 feet by 20 feet is on a rectangular lot 158 feet by 42 feet. The rest of the lot is grass. Approximately how many square feet is grass?

- a. 6,300                              b. 10,200  
c. 5,800                              d. 7,900



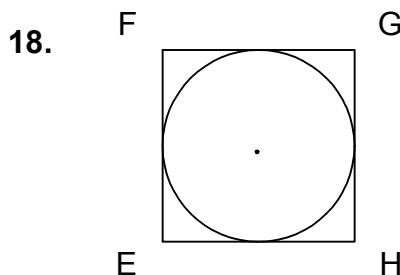
What is the area of the triangle shown above?

- a. 96 square units              b. 192 square units  
c. 160 square units              d. 80 square units



What is the volume of the box shown above in cubic inches ( $\text{in.}^3$ )?

- a. 25                                  b. 2,112  
c. 564                                  d. 1,056

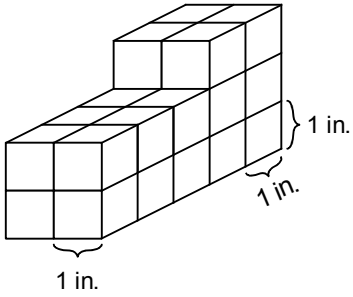


In the figure above, the radius of the inscribed circle is 36 inches (in.). What is the perimeter of the square EFGH?

- a. 288 in.                              b. 316 in.  
c.  $176\pi$  in.                              d.  $144\pi$  in.

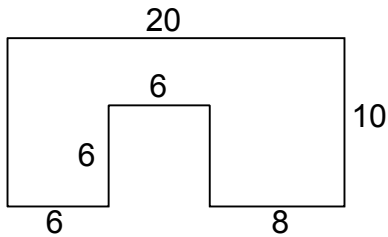
## CAHSEE Bench Mark Practice 22

1. One-inch square cubes are stacked as shown in the drawing below.



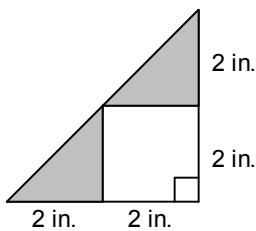
What is the total surface area?

- a.  $56 \text{ in.}^2$                       b.  $64 \text{ in.}^2$   
 c.  $72 \text{ in.}^2$                       d.  $80 \text{ in.}^2$
- 2.



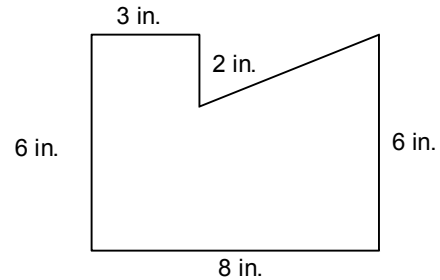
In the figure shown above, all the corners form right angles. What is the area of the figure in square units?

- a. 106                                  b. 124  
 c. 148                                  d. 164
3. What is the area of the shaded region in the figure shown below?



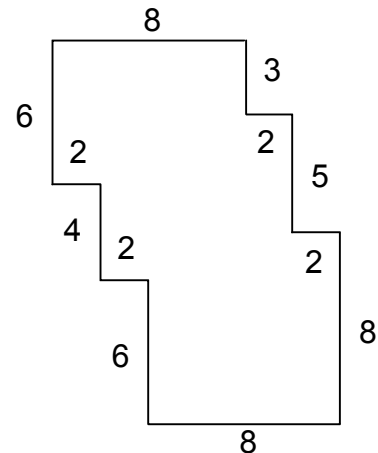
- a.  $16 \text{ in.}^2$                       b.  $8 \text{ in.}^2$   
 c.  $6 \text{ in.}^2$                       d.  $4 \text{ in.}^2$

4. A right triangle is removed from a rectangle as shown in the figure below. Find the area of the remaining part of the rectangle.



- a.  $61 \text{ in.}^2$                       b.  $52 \text{ in.}^2$   
 c.  $47 \text{ in.}^2$                       d.  $43 \text{ in.}^2$

5. In the figure shown below, all the corners form right angles.

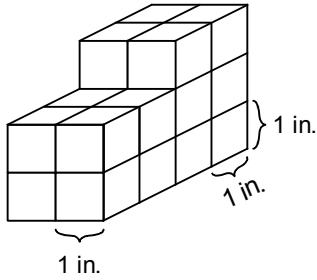


What is the area of the figure in square units?

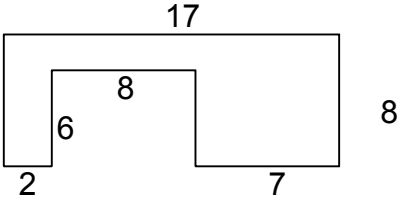
- a. 114                                  b. 138  
 c. 156                                  d. 164

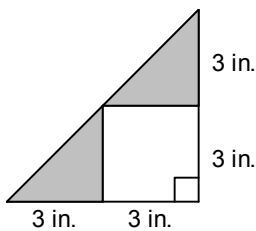
## CAHSEE Bench Mark Practice 22

6. One-inch square cubes are stacked as shown in the drawing below.



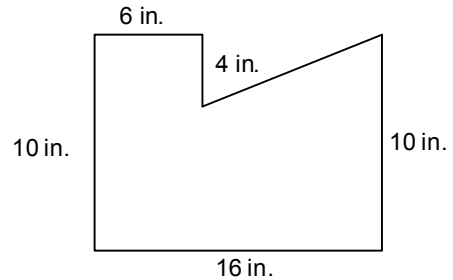
What is the total surface area?

- a.  $56 \text{ in.}^2$                       b.  $48 \text{ in.}^2$   
 c.  $42 \text{ in.}^2$                       d.  $36 \text{ in.}^2$
7. 
- In the figure shown above, all the corners form right angles. What is the area of the figure in square units?
- a. 80                                      b. 88  
 c. 96                                      d. 108
8. What is the area of the shaded region in the figure shown below?



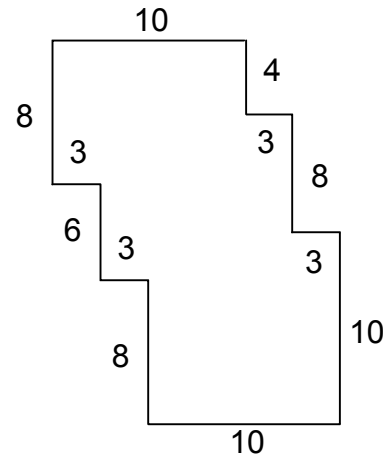
- a.  $9 \text{ in.}^2$                               b.  $8 \text{ in.}^2$   
 c.  $6 \text{ in.}^2$                               d.  $10 \text{ in.}^2$

9. A right triangle is removed from a rectangle as shown in the figure below. Find the area of the remaining part of the rectangle.



- a.  $100 \text{ in.}^2$                           b.  $120 \text{ in.}^2$   
 c.  $140 \text{ in.}^2$                           d.  $160 \text{ in.}^2$

10. In the figure shown below, all the corners form right angles.

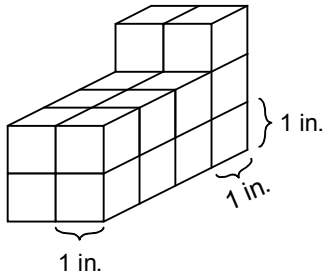


What is the area of the figure in square units?

- a. 224                                      b. 238  
 c. 188                                      d. 164

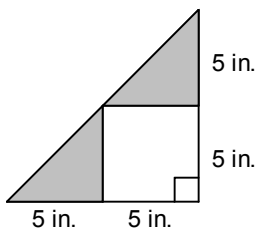
## CAHSEE Bench Mark Practice 22

11. One-inch square cubes are stacked as shown in the drawing below.



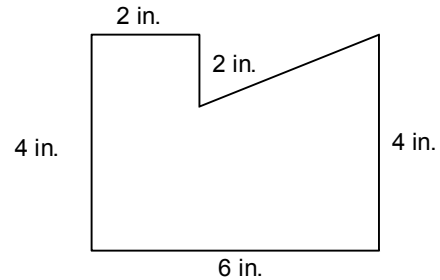
What is the total surface area?

- a. 46 in.<sup>2</sup>                      b. 52 in.<sup>2</sup>  
 c. 64 in.<sup>2</sup>                      d. 78 in.<sup>2</sup>
- 12.
- In the figure shown above, all the corners form right angles. What is the area of the figure in square units?
- a. 78                                  b. 64  
 c. 52                                  d. 44
13. What is the area of the shaded region in the figure shown below?



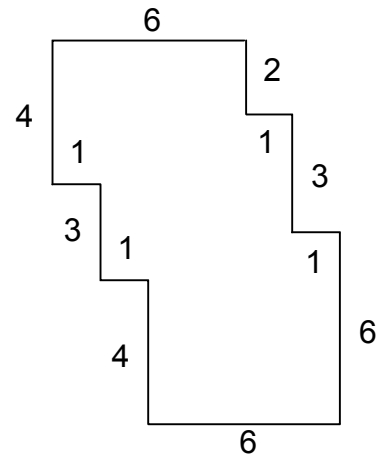
- a. 10 in.<sup>2</sup>                      b. 25 in.<sup>2</sup>  
 c. 50 in.<sup>2</sup>                      d. 40 in.<sup>2</sup>

14. A right triangle is removed from a rectangle as shown in the figure below. Find the area of the remaining part of the rectangle.



- a. 16 in.<sup>2</sup>                      b. 34 in.<sup>2</sup>  
 c. 28 in.<sup>2</sup>                      d. 20 in.<sup>2</sup>

15. In the figure shown below, all the corners form right angles.



What is the area of the figure in square units?

- a. 64                                  b. 52  
 c. 70                                  d. 40