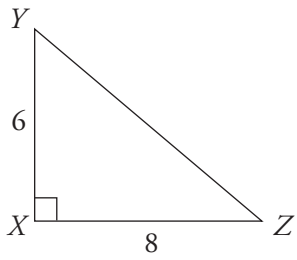
# Drill 2

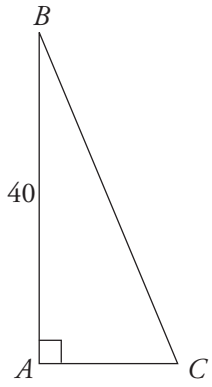
Answers can be found in Part IV.




a. What is the area of triangle *XYZ* above? _____

b. What is the length of *YZ*? _____

c. What is the sine of $\angle Z$? _____

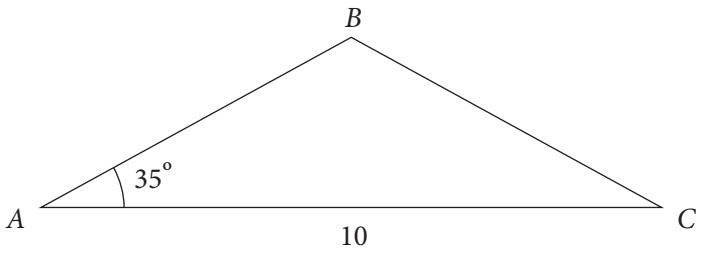



d. If the area of the triangle above is 400, what is the length of *AC*? _____

e. What is the length of *BC*? _____

f. What is the cosine of $\angle C$? _____

**13**




In the triangle above, $AB = BC$. Which of the following accurately expresses the perimeter of the triangle?

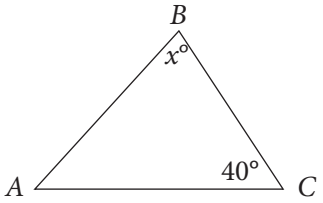
A) $10 + 10 \sin 55°$

B) $10 + 10 \cos 35°$

C) $10 + \dfrac{10}{\sin 55°}$

D) $25 \tan 35°$

**14**



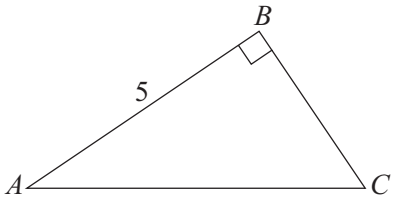

Note: Figure not drawn to scale.

In triangle $ABC$ above, if $AB = BC$, what is the value of $x$ ?

(Disregard the degree symbol when gridding your answer.)

| | | | |
|---|---|---|---|
| | / | / | |
| . | . | . | . |
| | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 |

8




Note: Figure not drawn to scale.

In the figure above, if triangle $ABC$ is isosceles, what is the perimeter of the triangle?

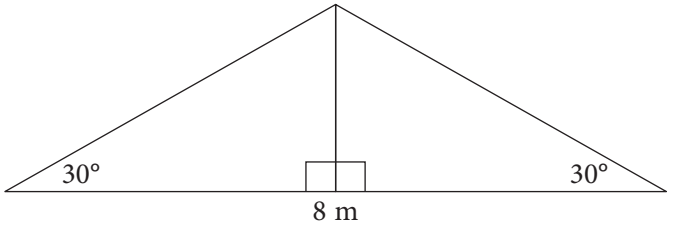
A) 12.5

B) $10\sqrt{2}$

C) $10+5\sqrt{2}$

D) $15\sqrt{2}$

9




The owner of a barn needs to paint the front of the barn's roof. As shown in the figure above, the roof measures 8 m along the bottom, and the sides of the roof meet the bottom at a 30° angle. If one bucket of paint can cover 5 $m^2$, what is the minimum number of buckets the owner needs to purchase?

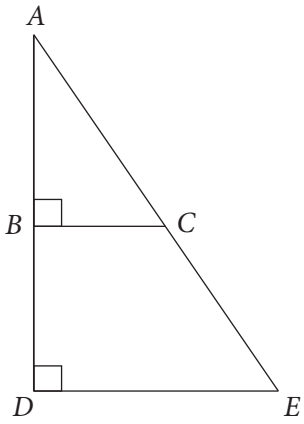
A) 1

B) 2

C) 3

D) 4

10




Note: Figure not drawn to scale.

In the figure above, if $AB = 5$, $AC = 13$, and $DE = 24$, what is the value of $BD$ ?

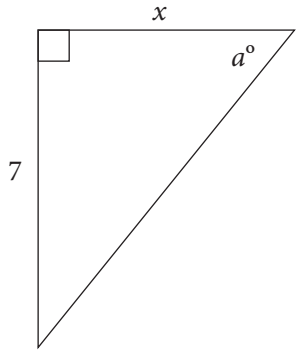
A) 12

B) 10

C) 8

D) 5

28




In the triangle above, $\tan a^\circ = \frac{14}{15}$. What is the value of $x$ ?

| | | | |
|---|---|---|---|
| | / | / | |
| . | . | . | . |
| | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 |
| 2 | 2 | 2 | 2 |
| 3 | 3 | 3 | 3 |
| 4 | 4 | 4 | 4 |
| 5 | 5 | 5 | 5 |
| 6 | 6 | 6 | 6 |
| 7 | 7 | 7 | 7 |
| 8 | 8 | 8 | 8 |
| 9 | 9 | 9 | 9 |