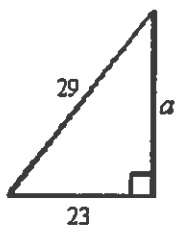


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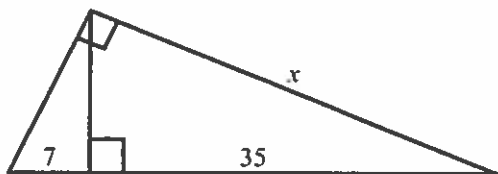
Geometry Chapter 7 Test**Multiple Choice***Identify the choice that best completes the statement or answers the question.*

- _____ 1. Use the pythagorean theorem to find the length of the leg of this right triangle. Give an approximation to 3 decimal places.



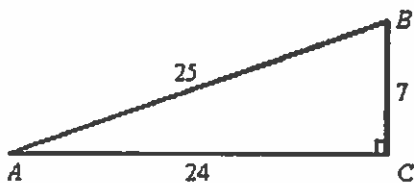
- a. 37.014 c. 17.378
b. 7.211 d. 17.664

- _____ 2. Find the value of x . (geometric means theorem)



- a. $\sqrt{77}$ b. $7\sqrt{5}$ c. $7\sqrt{6}$ d. $7\sqrt{30}$

- _____ 3. Write $\cos B$.

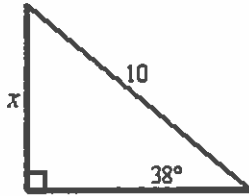


- a. $\frac{24}{25}$ b. $\frac{7}{24}$ c. $\frac{7}{25}$ d. $\frac{24}{7}$

Name: _____

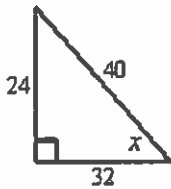
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___ 4. What is x to the nearest hundredth? (not drawn to scale)



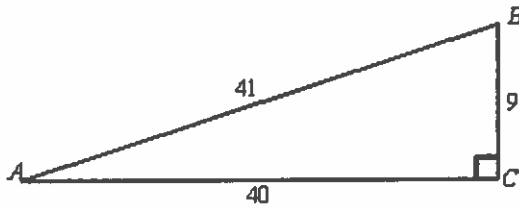
- a. $x = 7.81$ b. $x = 6.16$ c. $x = 12.8$ d. $x = 7.88$

___ 5. Use the diagram to find $\sin x$ as a fraction in simplest form.



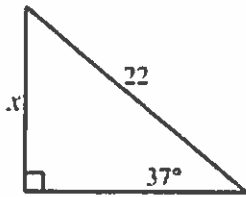
- a. $\frac{1}{3}$ c. $\frac{3}{4}$
b. $\frac{4}{5}$ d. $\frac{3}{5}$

___ 6. Find $\cos B$ for the right triangle below:



- a. $\frac{40}{9}$ b. $\frac{40}{41}$ c. $\frac{9}{41}$ d. $\frac{9}{40}$

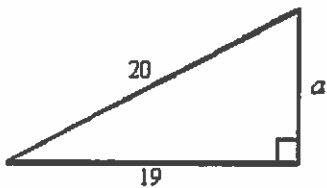
- ___ 7. Find x . Round the result to the nearest hundredth.



- a. $x = 16.58$ c. $x = 29.19$
b. $x = 13.24$ d. $x = 17.57$
- ___ 8. Assume that $\angle A$ is an acute angle and $\tan A = 1.230$. Use the inverse functions to find the measure of $\angle A$ is _____.
- a. about 39.1° c. about 50.9°
b. about 7.01° d. about 129.9°

Short Answer

9. Use the pythagorean theorem to find the length of the leg of this right triangle. Give an approximation to 3 decimal places.



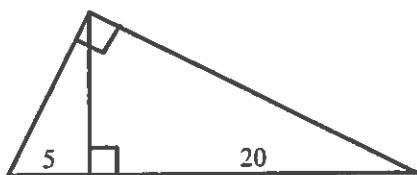
10. Use the pythagorean theorem to find the altitude of an isosceles triangle with base 10 and congruent sides of length 9. (draw a picture first to help)
11. Find the area of the isosceles triangle with side lengths 14 inches, 25 inches, and 25 inches. Use the pythagorean theorem to find the altitude and then calculate the area.

Name: _____

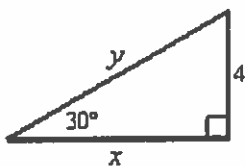
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12. A triangle has side lengths of 6, 9, and 11. Decide whether it is an acute, right, or obtuse triangle. Explain.

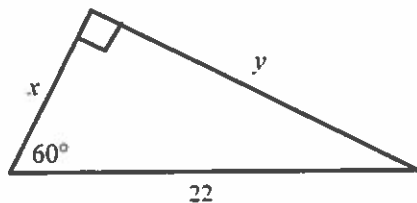
13. Find the length of the altitude drawn to the hypotenuse. (geometric mean theorem)



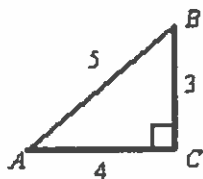
14. Find the value of x and y .



15. Find the value of x and y .



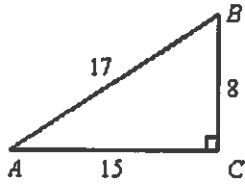
16. Find $\tan B$ for the right triangle below:



Name: _____

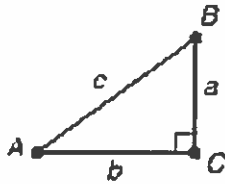
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17. Write $\sin B$.

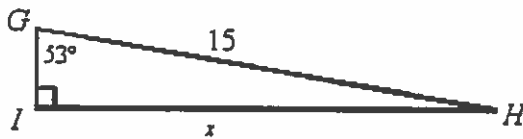


18. Write the trigonometric ratio.

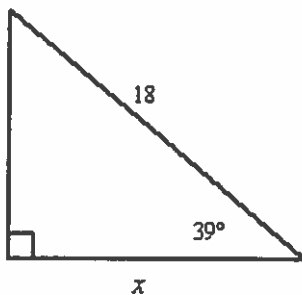
- a. $\sin A$
- b. $\tan B$
- c. $\cos A$



19. Find the value of x , to the nearest whole number. (not drawn to scale)



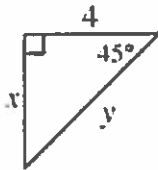
20. Find x , to the nearest hundredth.



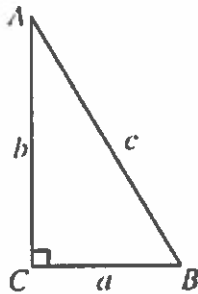
21. Find the missing side lengths for x and y .



22. Find the missing side lengths for x and y .

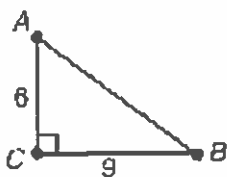


23. Solve $\triangle ABC$ using the diagram and the given measurements.
 (Note: The triangle is not drawn to scale.)
 $B = 43^\circ, a = 7$



24. Assume that $\angle A$ is an acute angle. If $\sin A = 0.994$, use a calculator and the inverse functions to find the measure of $\angle A$ to two decimal places.

25. $\triangle ABC$ is a right triangle. Using the pythagorean theorem, find $AB = \underline{\hspace{2cm}}$.



**Geometry Chapter 7 Test
Answer Section****MULTIPLE CHOICE**

1. D
2. D
3. C
4. B
5. D
6. C
7. B
8. C

SHORT ANSWER

9. 6.245
10. $\sqrt{56}$ or $2\sqrt{14}$
11. 168 in.²
12. Since $6^2 + 9^2 < 11^2$, it is an obtuse triangle.
13. 10
14. $x = 4\sqrt{3}$, $y = 8$
15. $x = 11$, $y = 11\sqrt{3}$
16. $\frac{4}{3}$
17. $\frac{15}{17}$
18. a. $\frac{a}{c}$ b. $\frac{b}{a}$ c. $\frac{b}{c}$
19. 12
20. 13.99
21. $x = \frac{4\sqrt{3}}{3}$, $y = \frac{8\sqrt{3}}{3}$
22. $x = 4$, $y = 4\sqrt{2}$
23. $A = 47^\circ$, $b = 6.53$, $c = 9.57$
24. 83.72°
25. $3\sqrt{13}$

