CHAPTER 10 QUIZ REIVEW (0.10, 10.3, 10.4) ANSWERS

Your quiz will be a NON-calculator quiz. Leave all answers in simplest fractional form.

For questions 1-4, Simplify:

1. $\sqrt{450x^9y^2z}$

$15x^4y\sqrt{2xz}$

2. $5\sqrt{7x}\cdot 2y\sqrt{14x^3z^5}$

$70x^2yz^2\sqrt{2z}$

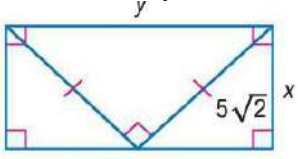
3. $\sqrt{1024c^{16}}$

$32c^8$

4. $-\sqrt{5x}\cdot 3\sqrt{5x}$

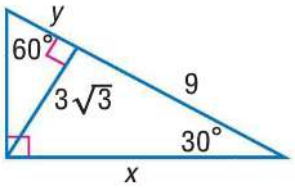
$-15x$

5. Find x and y



$x = 5; y = 10$

6. Find x and y



$x = 6\sqrt{3}$

$y = 3$

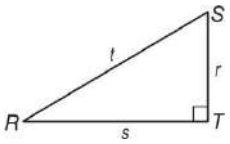
7. If the altitude of an equilateral triangle is 9, find the perimeter and the area of the triangle.

$18\sqrt{3}$

8. If the perimeter of a square is 32 meters, find the length of the diagonal.

$8\sqrt{2}\ meters$

Use the triangle below to answer questions 9 and 10.



9. Find the six trigonometric ratios for $\angle S$ if $r = 16, s = 30$ and $t = 34$

$\sin S = 15/17$ $\quad$ $\csc S = 17/15$

$\cos S = 8/17$ $\quad$ $\sec S = 17/8$

$\tan S = 15/8$ $\quad$ $\cot S = 8/15$

10. Find the six trigonometric ratios for $\angle R$ if $r = 10, s = 24, t = 26$

$\sin R = 5/13$ $\quad$ $\csc R = 13/5$

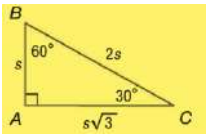
$\cos R = 12/13$ $\quad$ $\sec R = 13/12$

$\tan R = 5/12$ $\quad$ $\cot R = 12/5$

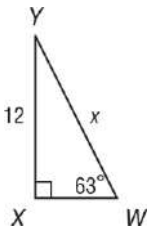
11. Use a special right triangle express the sine, cosine and tangent of $45°$.

$$\sin 45° = \frac{\sqrt{2}}{2}, \cos 45° = \frac{\sqrt{2}}{2}, \tan 45° = 1$$

12. Draw and label a $30° - 60° - 90°$ triangle.

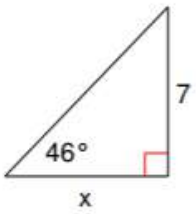


13. Find the exact value for x.



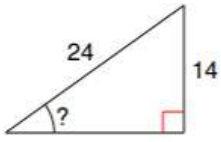
$$x = \frac{12}{\sin 63°}$$

14. Find the exact value for x.



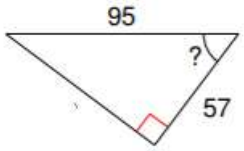
$$x = \frac{7}{\tan 46°}$$

15. Find the indicated missing angle



$$\sin^{-1}\left(\frac{14}{24}\right)$$

16. Find the indicated missing angle



$$\cos^{-1}\left(\frac{57}{95}\right)$$

17. In ΔABC, $\tan B = \frac{3}{4}$. Find the other 5 trigonometric ratios of $\angle B$ if $\angle C = 90°$

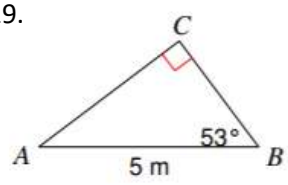
$$\sin B = 3/5 \qquad \csc B = 5/3$$
$$\cos B = 4/5 \qquad \sec B = 5/4$$
$$\tan B = 3/4 \qquad \cot B = 4/3$$

18. In ΔABC, $\cos B = \frac{7}{\sqrt{74}}$. Find the other 5 trigonometric ratios of $\angle B$ if $\angle C = 90°$. Simplify your final answers.

$$\sin B = \frac{5\sqrt{74}}{74} \qquad \csc B = \sqrt{74}/5$$
$$\cos B = \frac{7\sqrt{74}}{74} \qquad \sec B = \sqrt{74}/7$$
$$\tan B = 5/7 \qquad \cot B = 7/5$$

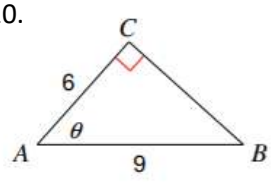
USE A CALCULATOR FOR THE FOLLOWING TWO PROBLEMS: For questions 19 and 20, solve the right triangles. Round all angle measures to the nearest degree and all sides to the nearest tenth.

19.



$$m\angle A = 37°$$
$$AC = 4.0m$$
$$BC = 3.0m$$

20.



**Ignore the θ symbol

$$BC = 6.7$$
$$m\angle A = 48°$$
$$m\angle B = 42°$$