What are we learning in the Right Triangles Chapter 9?
**Please indicate how you feel about the required topics in this unit. **

| Objective | Example | Answer | Rating |
| :---: | :---: | :---: | :---: |
| Simplify radicals | Simplify the following values: <br> a. $5 \sqrt{1134}$ <br> b. $2 \sqrt{75}-3 \sqrt{147}$ <br> c. $(5-3 \sqrt{2})^{2}$ <br> d. $\frac{5}{\sqrt{27}}$ | a. $45 \sqrt{14}$ <br> b. $-11 \sqrt{3}$ <br> c. $43-30 \sqrt{2}$ <br> d. $\frac{5 \sqrt{3}}{9}$ |  |
| Solve a quadratic equation by various methods | Solve for x : <br> a. $8 x^{2}+2 x-3=0$ <br> b. $5 x^{2}-6 x-2=0$ <br> c. $3 x^{2}-4=104$ | a. $\quad x=\frac{1}{2}, \frac{-3}{4}$ <br> b. $x=\frac{3 \pm \sqrt{19}}{5}$ <br> c. $x= \pm 6$ |  |
| Apply Altitude on Hypotenuse Theorems | a. Find the measure of CR if $\mathrm{RU}=5$ and $\mathrm{RD}=10$. <br> b. Find the measure of UD if $\mathrm{UR}=10$ and $\mathrm{CR}=25$. <br> c. Find the measure of CU if $R U=2$ and $C D=2 \sqrt{6}$. | a. $\quad C R=20$ <br> b. $\mathrm{UD}=5 \sqrt{6}$ <br> c. $\mathrm{CU}=4$ | () $)^{(2)}$ |
| Apply the Pythagorean <br> Theorem, families of right triangles, and the reduced triangle principle to find missing sides of a triangle | Calculate the perimeter of the interior quadrilateral formed from connecting points on the rectangle: | $\sqrt{61}+17+2 \sqrt{53}+2 \sqrt{10}$ | () ${ }^{\text {P }} \times$ |


| Use the distance formula to find the distance between two points | a. A triangle has points $\mathrm{A}(-3,7), \mathrm{B}(4,5)$ and $\mathrm{C}(1,-2)$. Find the length of the median from B to $\overline{A C}$. <br> b. The distance between $(-2,4)$ and $(x, 16)$ is $4 \sqrt{13}$. What is the x value? | a. $\frac{5}{2} \sqrt{5}$ <br> b. $x=6$ or -10 | (-) $\left.)^{( }\right)$ |
| :---: | :---: | :---: | :---: |
| Apply rules for $30^{\circ}-60^{\circ}-90^{\circ}$ triangles | Calculate the span for a regular hexagon if each side length is $8 \sqrt{3}$. | 24 |  |
| Apply rules for $45^{\circ}-45^{\circ}-90^{\circ}$ triangles | Calculate the perimeter of the isosceles triangle below: | $52+10 \sqrt{2}$ |  |
| Apply the Pythagorean Theorem in three dimensions | Given a square pyramid with slant height of 40 and lateral edge of 41 , what is the length of the edge of the base? What is the length of the altitude? | $\begin{gathered} \text { Base edge }=18 \\ \text { Altitude }=\sqrt{1519} \end{gathered}$ |  |

