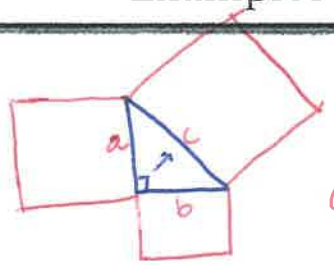
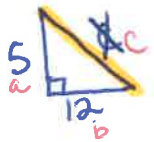
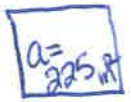
KEY

Problem	Examples	Rules
Definition	 $a^2+b^2=c^2$ a+b are legs c is hypotenuse	In a right triangle, the square of the length of the hypotenuse is equal to the sum of the squares of the lengths of the legs.
Missing the Hypotenuse	 $a^2+b^2=c^2$ $(5)^2+(12)^2=x^2$ $25+144=x^2$ $\sqrt{169}=\sqrt{x^2}$ $13=x$ Hypotenuse is 13 units long	1. Square the legs 2. Add 3. Take the square root
Missing a Leg	 $a^2+b^2=c^2$ $(8)^2+x^2=(10)^2$ $64+x^2=100$ $-64 \quad -64$ $\sqrt{x^2}=\sqrt{36}$ $x=6$ Leg is 6 units long	1. Square the leg and hypotenuse 2. Subtract 3. Square Root
How do you find the lengths of a square if given the area?	 If area is $225\,in^2$... $\sqrt{225}=15$ Side length is 15 in long $15 \cdot 15 = 225$	Take the square root of the area given.
Estimating a square Root	Find the square root of 12. 9, 12, 16 $\sqrt{9}, \sqrt{12}, \sqrt{16}$ 3, $\sqrt{12}$, 4 $\sqrt{12}$ is b/w 3 + 4; closer to 3	Find the two perfect squares the value is close to.