

**Write the proportion. Then find the geometric mean of each pair of numbers. Leave all answers in simplest radical form.**

1. 5 and 20

2. 4 and 8

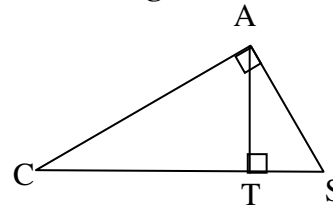
3. 3 and 15

4. 12 and 2

**Use the right triangle on the right to complete the following.**

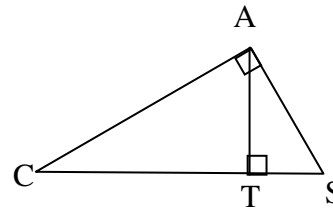
5. **The altitude to the hypotenuse is the geometric mean of the two segments of the hypotenuse.**

$$\frac{\quad}{AT} = \frac{\quad}{\quad}$$

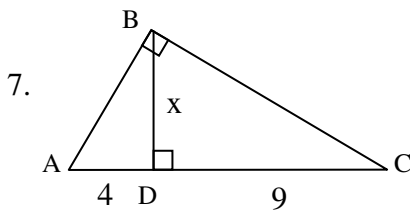


6. **The leg is the geometric mean between hypotenuse and the adjacent part of the hypotenuse**

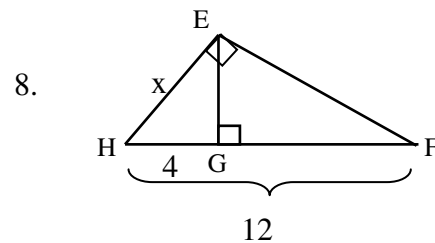
$$\frac{\quad}{CA} = \frac{\quad}{\quad} \quad \text{and} \quad \frac{\quad}{AS} = \frac{\quad}{\quad}$$



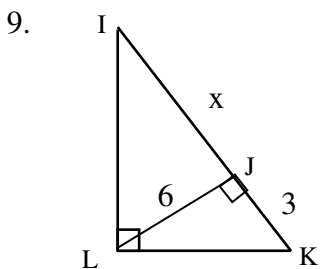
**Find the value of each variable. Leave answers in simplest radical form. Show work!!!!**



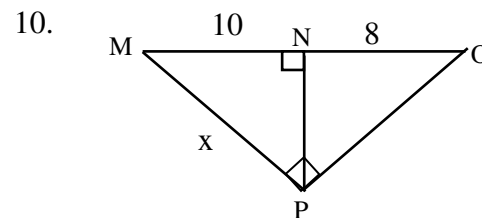
$x = \underline{\hspace{2cm}}$



$x = \underline{\hspace{2cm}}$

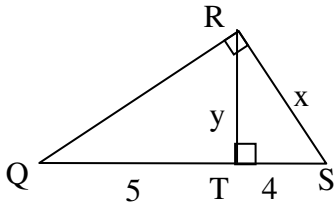


$x = \underline{\hspace{2cm}}$



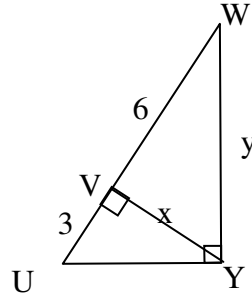
$x = \underline{\hspace{2cm}}$

11.



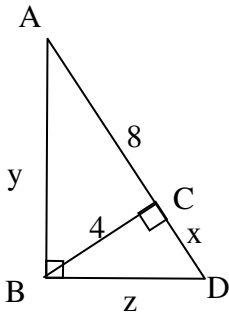
$x = \underline{\hspace{2cm}}$        $y = \underline{\hspace{2cm}}$

12.



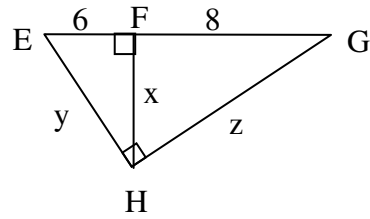
$x = \underline{\hspace{2cm}}$        $y = \underline{\hspace{2cm}}$

13.



$x = \underline{\hspace{2cm}}$        $y = \underline{\hspace{2cm}}$        $z = \underline{\hspace{2cm}}$

14.



$x = \underline{\hspace{2cm}}$        $y = \underline{\hspace{2cm}}$        $z = \underline{\hspace{2cm}}$

ANS BANK.(All answers will be used. Some answers may be used twice)

2, 6, 10, 12,  $3\sqrt{2}$ ;  $4\sqrt{2}$ ;  $4\sqrt{3}$ ;  $2\sqrt{5}$ ;  $3\sqrt{5}$ ;  $6\sqrt{5}$ ;  $4\sqrt{5}$ ;  $2\sqrt{6}$ ;  $3\sqrt{6}$ ;  $4\sqrt{7}$ ;  $2\sqrt{21}$ ;