Pythagorean Theorem Worksheet #1

Solve for the unknown side in each right triangle.

1. \[ \triangle RST \]
   \[ RT = 12, TS = 9, RS = c \]

2. \[ \triangle XYZ \]
   \[ XZ = 10, YZ = c, XY = 24 \]

3. \[ \triangle CBA \]
   \[ CB = 15, AB = 25, CA = b \]

4. \[ \triangle ABC \]
   \[ AB = 12, BC = 5, AC = c \]

5. \[ \triangle BCA \]
   \[ BC = 45, CA = 24, AB = c \]

6. \[ \triangle ABC \]
   \[ AB = 29, BC = 21, AC = b \]

7. \[ \triangle ABC \]
   \[ AB = 78, BC = 30, AC = b \]

8. \[ \triangle ABC \]
   \[ AB = 56, BC = 70, AC = a \]

9. \[ \triangle ABC \]
   \[ AB = 120, BC = 22, AC = c \]
10. \( a = 8, \ b = 15, \ c = {?} \)  
11. \( a = 30, \ b = ?, \ c = 50 \)  
12. \( a = 30, \ b = 72, \ c = {?} \)  
13. \( a = 65, \ b = ?, \ c = 97 \)  
14. Use the Pythagorean Theorem to find the missing side of the triangle if the hypotenuse is 68 and the other side is 32.
15. Use the Pythagorean Theorem to find the base of the triangle shown.

![Triangle with sides 117 and 108]