

1-12. NO CALCULATOR ON THIS SECTION. Simplify the roots. Show all work. No decimal answers.

1. $\sqrt{112}$

2. $\sqrt{12} + \sqrt{27}$

3. $5\sqrt{3} \cdot 7$

4. $4\sqrt{2} \cdot 5\sqrt{8}$

5. $9\sqrt{3} \cdot 2\sqrt{15}$

6. $11\sqrt{36}$

7. $2\sqrt{5} + 5\sqrt{5}$

8. $6\sqrt{3} - 5 - 9\sqrt{3}$

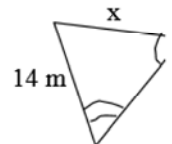
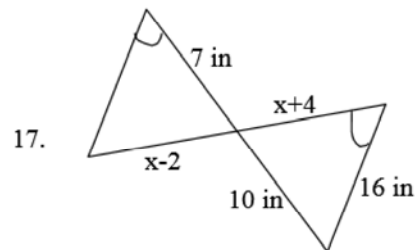
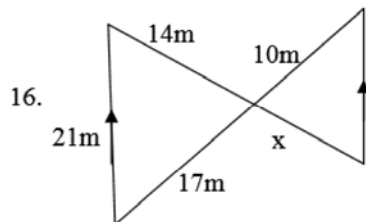
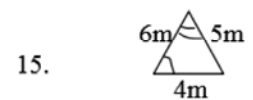
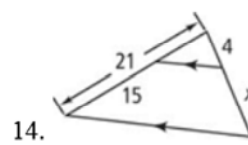
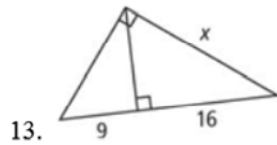
9. $(5\sqrt{2})^2$

10. $\frac{\sqrt{18}}{\sqrt{2}}$

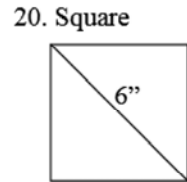
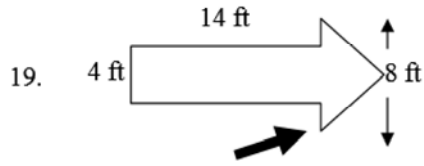
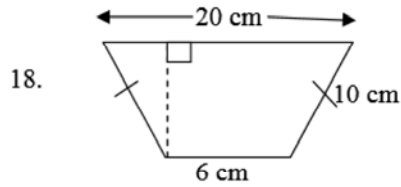
11. $\frac{9}{\sqrt{5}}$

12. $\frac{32\sqrt{6}}{8}$

13-16. Find the missing side. Round to the nearest tenth if necessary.

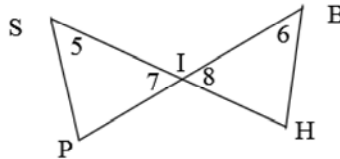


For #18-20 find the area of the given shape. Round answers to nearest tenth, if necessary.



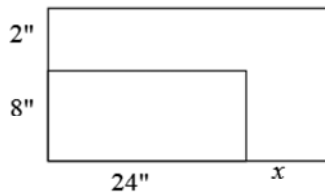
21. **Given:** $\angle P \cong \angle H$

Prove: $SP/BH = SI/BI$



Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.

22. Given that the rectangles are similar, find x .



23. The ratio of the sides of two similar rectangles is 8 to 11.

a. The ratio of their perimeters is _____.

b. The ratio of their areas is _____.