

Pythagorean & Radical Review

Name: _____

Find the square root(s).

1. $-\sqrt{25}$

2. $\sqrt{169}$

3. $\pm\sqrt{\frac{16}{49}}$

4. $\sqrt{\frac{121}{81}}$

Evaluate the expression. Show your work!!

5. $8 - 2\sqrt{49}$

6. $\sqrt{0.36} + 4.2$

7. $-5\sqrt{81}$

8. $5 - \sqrt{1.69}$

9. $5\sqrt{64} + 7\sqrt{144}$

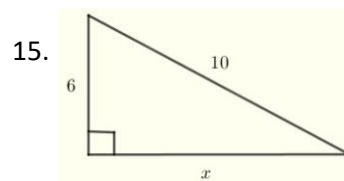
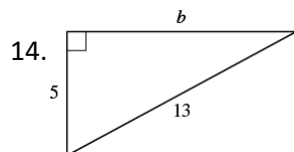
10. $\sqrt{441} - 2 \cdot 10$

11. $4\sqrt{36} - 10$

12. $5\left(\sqrt{\frac{450}{2}} - 7\right)$

13. $3\left(\sqrt{\frac{75}{3}} + 8\right)$

Find the missing length of the triangle. Show your work!



Tell whether the number is rational or irrational. Explain.

16. $-\sqrt{144}$

17. 8π

18. $6.\overline{45}$

19. $4\frac{3}{8}$

Estimate to the nearest integer.

20. $\sqrt{84}$

21. $-\sqrt{34}$

22. $\sqrt{18}$

23. Which number is greater, 12 or $\sqrt{166}$?

Find the cube root of the number.

24. $\sqrt[3]{343}$

25. $\sqrt[3]{-125}$

26. $\sqrt[3]{729}$

Simplify the expression. Show your work!

27. $3\sqrt{3} + 4\sqrt{3}$

28. $\frac{3}{2}\sqrt{15} + \frac{1}{2}\sqrt{15}$

29. $4\sqrt{2} - 2\sqrt{2}$

30. $\sqrt{162}$

31. $\sqrt{75}$

32. $\sqrt{500}$

Tell whether the triangle with the given side lengths is a right triangle. Show your work!

33. 8 inches, 15 inches, 17 inches

34. 5 feet, 11 feet, 13 feet

For each of the word problems, draw a picture and show your work!!

35. George rides his bike 9 km south and then 12 km east. How far is he from his starting point?

36. Find the length of a rectangle that has a diagonal of 25 feet and a width of 15 feet.

37. How far from the base of the house do you need to place a 15-foot ladder so that it exactly reaches the top of a 12-foot tall wall?