

Mistakes are expected, inspected, corrected and respected.

1. Find the area of every square that can be drawn by connecting dots on a 3-dot by 3-dot grid.



2. Draw a hexagon with an area of 16 square units.

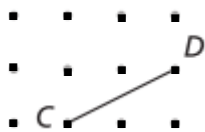
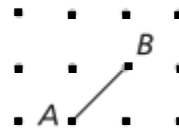


3. Draw a square with an area of 2 square units.
Write an argument to convince a friend that the area is 2 units².



4. Consider segment AB at right. Draw a square with side AB.
What is the area of the square?

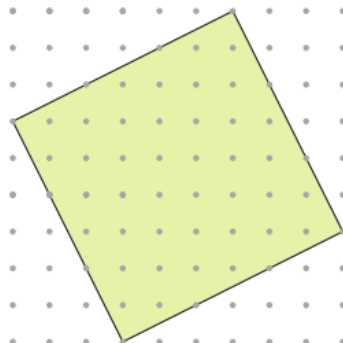
Use a calculator to estimate the length of segment AB.



5. Consider segment CD at left. Draw a square with side CD.
What is the area of the square?

Use a calculator to estimate the length of segment CD.

6. Find the area and side length of this square.



For #7-34, do NOT use the $\sqrt{\quad}$ button on your calculator.
For #7-9, estimate each square root to one decimal place.

7. $\sqrt{11}$

8. $\sqrt{30}$

9. $\sqrt{172}$

10. Multiple Choice: Choose the pair of numbers $\sqrt{15}$ is between.

A. 3.7 and 3.8

B. 3.8 and 3.9

C. 3.9 and 4.0

D. 14 and 16

Find exact values for each square root.

11. $\sqrt{144}$

12. $\sqrt{0.36}$

13. $\sqrt{961}$

Find the two consecutive whole numbers the square root is between.

14. $\sqrt{27}$

15. $\sqrt{1000}$

Tell whether each statement is true.

16. $6 = \sqrt{36}$

17. $1.5 = \sqrt{2.25}$

18. $11 = \sqrt{101}$

Find the missing number.

19. $\sqrt{x} = 81$

20. $14 = \sqrt{x}$

21. $25 = \sqrt{x}$

22. $\sqrt{x} = 3.2$

23. $\sqrt{x} = \frac{1}{4}$

24. $\sqrt{\frac{4}{9}} = x$

Find each product.

25. $\sqrt{2} \cdot \sqrt{2}$

26. $\sqrt{3} \cdot \sqrt{3}$

27. $\sqrt{4} \cdot \sqrt{4}$

28. $\sqrt{5} \cdot \sqrt{5}$

Give both the positive and negative square roots of each number.

29. 1

30. 4

31. 2

32. 16

33. 25

34. 5

35. What is the side length of a square whose area is 121 units² ?

36. Find x if $x^2 = 121$.

