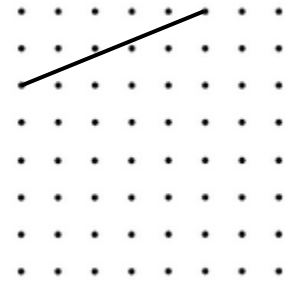


If it doesn't challenge me, it won't change me.

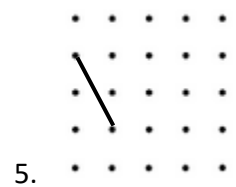
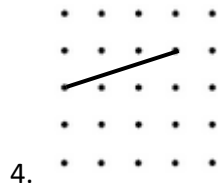
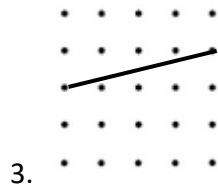
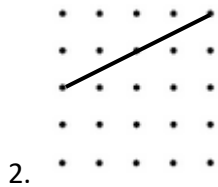
1. Consider this segment.

a. Express the exact length of the segment, using the $\sqrt{\quad}$ symbol.



b. What two consecutive whole numbers is the length of the segment between?

Write the exact and approximate length for each segment.



Simplify.

6) $\sqrt{162}$

7) $\sqrt{294}$

8) $\sqrt{432}$

9) $\sqrt{160}$

10) $\sqrt{1500}$

11) $\sqrt{384}$

12) $-\sqrt{24} - 2\sqrt{6}$

13) $2\sqrt{3} - 3\sqrt{12}$

14) $3\sqrt{5} - 2\sqrt{5}$

15) $2\sqrt{8} + 3\sqrt{18}$

16) $-\sqrt{20} - 2\sqrt{20}$

17) $-3\sqrt{12} - 2\sqrt{3}$



18) $3\sqrt{45} + 2\sqrt{2} - 2\sqrt{45}$

19) $2\sqrt{2} - 3\sqrt{45} - 2\sqrt{5}$

20) $2\sqrt{5} + 3\sqrt{45} + 3\sqrt{24}$

21) $2\sqrt{6} + 3\sqrt{6} + 3\sqrt{24}$

22) $2\sqrt{54} - \sqrt{24} - \sqrt{27} - 2\sqrt{6}$

23) $-\sqrt{8} - 2\sqrt{45} - 2\sqrt{2} - \sqrt{2}$

24) $\sqrt{6} \cdot -4\sqrt{3}$

25) $\sqrt{9} \cdot \sqrt{4}$

26) $2\sqrt{3} \cdot 3\sqrt{12}$

27) $\sqrt{5} \cdot -\sqrt{15}$

28) $\sqrt{3}(-4\sqrt{5} - 2\sqrt{6})$

29) $\sqrt{6}(\sqrt{6} + 2)$

30) $\sqrt{15}(\sqrt{10} + 5\sqrt{6})$

31) $\sqrt{6}(\sqrt{2} + 5)$

32) $\sqrt[3]{128}$

33) $\sqrt[3]{750}$

34) $\sqrt[3]{54} + \sqrt[3]{432}$

Solve for the variable:

35) $x^2 = 900$

36) $k^2 = 1000$

37) $a^2 = 54$