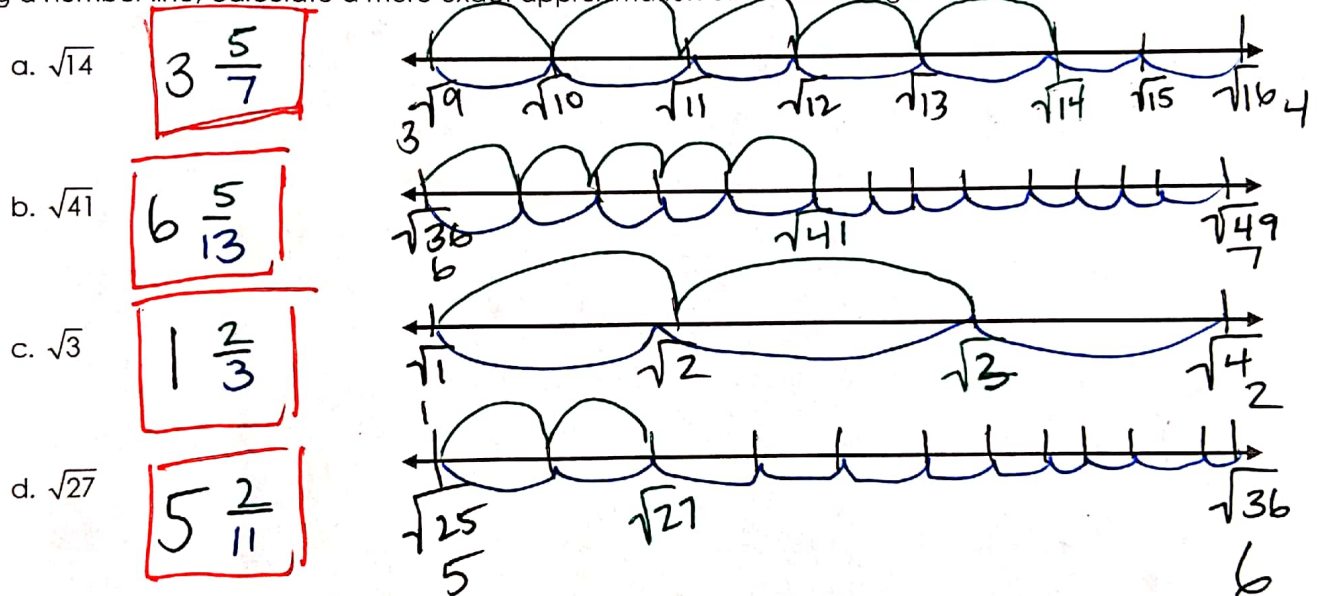


Practice Assignment

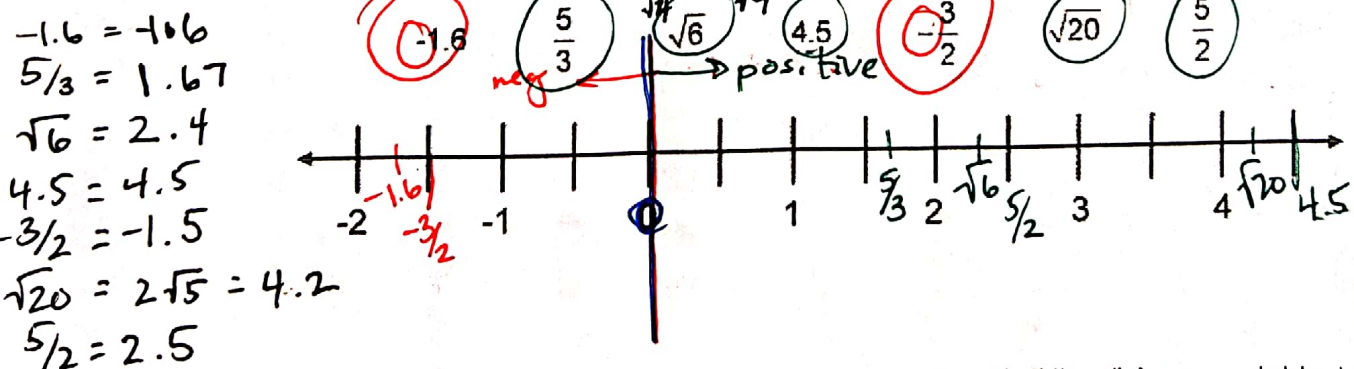
1. Estimate the square root of each number to the two whole numbers that it lays between. Then state if it is closer to the lower or high whole number.

- a. The square root of $\sqrt{11}$ is between $\sqrt{9}$ & $\sqrt{16}$. It is closer to 3.
- b. The square root of $\sqrt{32}$ is between $\sqrt{25}$ & $\sqrt{36}$. It is closer to 6.
- c. The square root of $\sqrt{85}$ is between $\sqrt{81}$ & $\sqrt{100}$. It is closer to 9.
- d. The square root of $\sqrt{62}$ is between $\sqrt{49}$ & $\sqrt{64}$. It is closer to 8.

2. Using a number line, calculate a more exact approximation of the following radicals:

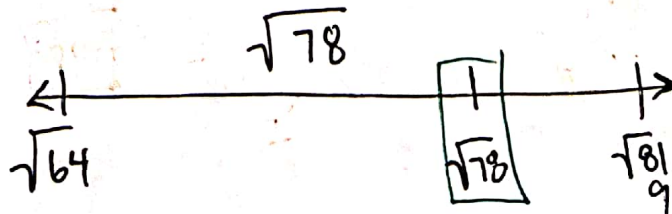


3. Without using a calculator, graph the numbers in order on the number.



4. After a crack in the sheetrock was repaired on a the square wall behind the dining room table, Mrs. Gonzalez decided to go ahead and paint the wall. The area of the wall was 78 ft². What was the estimated length of one side of the wall?

- A. 7.8 ft
B. 8.3 ft
C. 9.2 ft
D. 8.8 ft



5. Simplify the following radicals (Pick 4):

a. $\sqrt{45}$

Handwritten work: $\sqrt{3 \cdot 3 \cdot 5}$ with a red arrow pointing to the first 3. A box around the result $3\sqrt{5}$. Prime factorization tree for 45: 45 branches to 9 and 5; 9 branches to 3 and 3. The 3s are circled in green.

b. $\sqrt{125}$

Handwritten work: $\sqrt{5 \cdot 5 \cdot 5}$ with a red arrow pointing to the first 5. A box around the result $5\sqrt{5}$. Prime factorization tree for 125: 125 branches to 5 and 25; 25 branches to 5 and 5. The 5s are circled in black.

c. $\sqrt{80}$

Handwritten work: $\sqrt{2 \cdot 2 \cdot 2 \cdot 2 \cdot 5}$ with a red arrow pointing to the first 2. A box around the result $4\sqrt{5}$. Prime factorization tree for 80: 80 branches to 8 and 10; 8 branches to 4 and 2; 4 branches to 2 and 2. The 2s are circled in black.

d. $\sqrt{18}$

Handwritten work: $\sqrt{9 \cdot 2}$ with a red arrow pointing to the 9. A box around the result $3\sqrt{2}$. Prime factorization tree for 18: 18 branches to 9 and 2; 9 branches to 3 and 3. The 3s are circled in black.

e. $\sqrt{54}$

Handwritten work: $\sqrt{6 \cdot 9}$ with a red arrow pointing to the 9. A box around the result $3\sqrt{6}$. Prime factorization tree for 54: 54 branches to 6 and 9; 6 branches to 3 and 2; 9 branches to 3 and 3. The 3s are circled in black.

f. $\sqrt{44}$

Handwritten work: $\sqrt{4 \cdot 11}$ with a red arrow pointing to the 4. A box around the result $2\sqrt{11}$. Prime factorization tree for 44: 44 branches to 4 and 11; 4 branches to 2 and 2. The 2s are circled in black.

6. Simplify the following radicals (Pick 4):

a. $4\sqrt{36}$

b. $-7\sqrt{20}$

c. $6\sqrt{75}$

d. $8\sqrt{24}$

e. $3\sqrt{50}$

f. $-5\sqrt{54}$