Chapter 5 section 7
Square Roots

Number x^2 square of a number

$9^2 = 9 \bullet 9$ 81 is the square of the number 9

Since $9^2 = 81$ 81 square of the number 9
9 square root of the number 81

radical notation

$\sqrt{9} = 3$ $\sqrt{9}$ non negative (positive or zero) square root of 9

$-\sqrt{9} = -3$ $-\sqrt{9}$ negative square root of 9

$\sqrt{\ }$ radical
number - radicand

$\left(-3\right)^2 = 9$ $3^2 = 9$ -3, 3 square root of 9 so the 3 (positive value) is called the principal square root

Try:

a) $\sqrt{16}$ b) $\sqrt{81}$ c) $\sqrt{100}$ d) $-\sqrt{36}$ e) $-\sqrt{121}$

Order of operations:
1) grouping symbols

2) exponents, radicals

a) $-3\sqrt{9}+12\sqrt{4}$ b) $-2-3\sqrt{36}$ c) $\sqrt{9+16}$ d) $\sqrt{9}+\sqrt{16}$ e) $\sqrt{\frac{4}{9}}$

Estimate square roots.

$\sqrt{24}$ is between which two consecutive whole numbers?
Which whole number is closer?
Approximate the decimal.

$\sqrt{58}$ is between which two consecutive whole numbers?
Which whole number is closer?
Approximate the decimal.