Perfect Squares and Estimating Square Roots

The number x is the square root of y if $x^2 = y$

5 is a square root of 25 because $5^2 = 25$ 8 is a square root of 64 because $8^2 = 64$

-5 is a square root of 25 because $(-5)^2 = 25$ -8 is a square root of 64 because $(-8)^2 = 64$

A perfect square is the result of an integer squared.

x	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
x^2															

Perfect squares

$\sqrt{36}$ $\sqrt{196}$

$\sqrt{81}$ $\sqrt{9}$

A perfect square is the result of an integer squared.

x	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
x^2	1	4	9	16	25	36	49	64	81	100	121	144	169	196	225

$$\sqrt{30} \qquad\qquad\qquad \sqrt{72}$$

A perfect square is the result of an integer squared.

x	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
x^2	1	4	9	16	25	36	49	64	81	100	121	144	169	196	225

$$\sqrt{10} \qquad\qquad\qquad \sqrt{185}$$

A perfect square is the result of an integer squared.

x	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
x^2	1	4	9	16	25	36	49	64	81	100	121	144	169	196	225

$$-\sqrt{40}$$

$$-\sqrt{17}$$