Name _Notes_

Section 7.1

Algebra II: Square Roots

Essential Questions:	
What are square roots?	A $\frac{opposite\ of}{number\ times\ itself.}$

The symbol $\sqrt{}$ is called a __radical__ sign. It means Square root.

Number	Positive Square Root	Negative Square Root
$3^2 = 3 \cdot 3 = 9$	$\sqrt{9} = \sqrt{3 \cdot 3} = 3$	$-\sqrt{9} = -3$
$4^2 = 4 \cdot 4 = 16$	$\sqrt{16} = \sqrt{4 \cdot 4} = 4$	$-\sqrt{16} = -4$
$5^2 = 5 \cdot 5 = 25$	$\sqrt{25} = \sqrt{5 \cdot 5} = 5$	$-\sqrt{25} = -5$

Any number that is the square of an integer is called a perfect square.

Which numbers are perfect squares?

1) 49   2) 50   3) 1   4) 2   5) 0

$7 \cdot 7 = 49$ NO $1 \cdot 1 = 1$ NO $0 \cdot 0 = 0$

yes   yes   yes

Find the positive and negative values.

6) $\sqrt{81}$ 7) $-\sqrt{81}$ 8) $\sqrt{100}$ 9) $-\sqrt{7^2}$ 10) $\sqrt{13^2}$

$9 \cdot 9$ $10 \cdot 10$ $-\sqrt{7 \cdot 7}$ $\sqrt{13 \cdot 13}$

$= 9$ $= -9$ $= 10$ -7 $= 13$

Name _____

Multiply.

1	-6	-6	8	-9	-9	1	-6	-6	8
0	7	-3	-8	9	9	0	7	-3	-8
5	6	6	2	4	4	5	6	6	2
8	-9	-9	1	-6	-6	8	-9	-9	1
-8	10	10	0	7	-3	-8	10	10	0
2	4	4	5	6	6	2	4	4	5
1	-6	-6	8	8	1	1	-6	-6	8
0	7	-3	-8	9	9	0	7	-3	-8
5	6	6	2	4	4	5	6	6	2
8	-3	-3	1	-9	-9	8	-3	-3	1
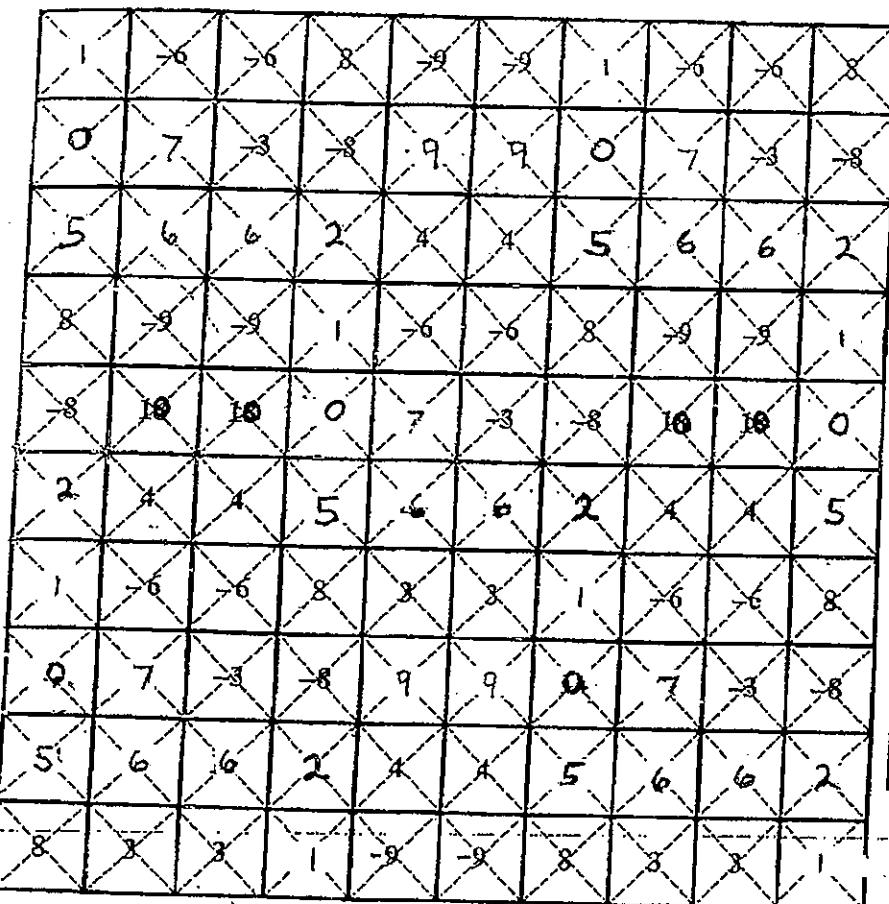
$\sqrt{4}$

$\sqrt{3^2 + 4^2}$

$\sqrt{9 + 16}$
$= \sqrt{25}$
$= 5$

$\sqrt{1}$

$\sqrt{64}$ $\sqrt{81}$ $-\sqrt{81}$

$-\sqrt{9}$ $\sqrt{16}$ $\sqrt{49}$

$\sqrt{36}$ $-\sqrt{64}$ $-\sqrt{36}$

$\sqrt{0}$ $\sqrt{9}$ $\sqrt{6^2 + 8^2}$