

Geometry
Guided Notes
Square Roots

Name: _____

Date: _____ Period: ____

1. The product of a number and itself is called a perfect square. What number multiplied by itself will give you the following numbers?

a. _____ x _____ = 1

h. _____ x _____ = 64

b. _____ x _____ = 4

i. _____ x _____ = 81

c. _____ x _____ = 9

j. _____ x _____ = 100

d. _____ x _____ = 16

k. _____ x _____ = 121

e. _____ x _____ = 25

l. _____ x _____ = 144

f. _____ x _____ = 36

m. _____ x _____ = 169

g. _____ x _____ = 49

n. _____ x _____ = 196

2. Find the perfect square factor for each of the following numbers.

a. 40 _____

b. 75 _____

c. 128 _____

d. 20 _____

e. 147 _____

f. 243 _____

g. 242 _____

h. 27 _____

i. 8 _____

j. 32 _____

3. What is the square root?

a. $\sqrt{9}$ _____ d. $\sqrt{121}$ _____ g. $\sqrt{144}$ _____ j. $\sqrt{225}$ _____ m. $\sqrt{25}$ _____

b. $\sqrt{36}$ _____ e. $\sqrt{4}$ _____ h. $\sqrt{100}$ _____ k. $\sqrt{49}$ _____ n. $\sqrt{196}$ _____

c. $\sqrt{169}$ _____ f. $\sqrt{64}$ _____ i. $\sqrt{81}$ _____ l. $\sqrt{16}$ _____

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4. Write the radical expression in simplest form.

Example: $\sqrt{605} = \sqrt{121 * 5} = \sqrt{121} * \sqrt{5} = 11 * \sqrt{5} = 11\sqrt{5}$

a. $\sqrt{40}$

b. $\sqrt{75}$

c. $\sqrt{27}$

d. $\sqrt{243}$

5. Write the radical expression in simplest form.

Example: $2\sqrt{75} = 2\sqrt{25 * 3} = 2\sqrt{25} * \sqrt{3} = 2 * 5 * \sqrt{3} = 10\sqrt{3}$

a. $-\sqrt{300}$

b. $3\sqrt{20}$

c. $-6\sqrt{28}$

d. $10\sqrt{242}$