

MasterMath

Name _____

Approximating and Finding Square Roots

Date _____

1. **Please determine or estimate the Square Root.**
Please do not use a calculator for this exercise.
If your estimates are within 1/10th of the correct answer, you are correct!

Number	Root
1	1
2	1.41
3	1.73
4	2.00
5	2.24
6	2.45
7	2.65
8	2.83
9	3.00
10	3.16
11	3.32
12	3.46
13	3.61
14	3.74
15	3.87
16	4.00

Number	Root
25	5.00
26	5.10
27	5.20
28	5.29
29	5.39
30	5.48
31	5.57
32	5.66
33	5.74
34	5.83
35	5.92
36	6.00
45	6.71
67	8.19
89	9.43
94	9.70

2. **The area of a circle is 50.24 Sq In. What is the radius of the circle?**

$$A = \pi r^2$$

4"

$$50.24 = 3.14r^2$$

$$50.24 \div 3.14 = r^2$$

$$16 = r^2$$

$$4 = r$$

3. **The area of a square is 20 1/4 sq cm. What is the length of the sides of this square?**

$$A = x^2$$

$$4^2 = 16$$

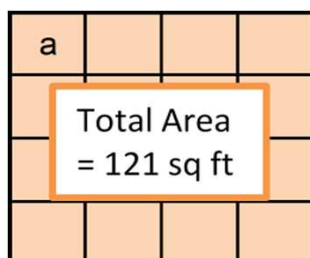
$$20.25 = x^2$$

$$5^2 = 25 \quad \left. \vphantom{5^2} \right\} 20.25$$

$$4.5 \approx x$$

4.5 cm

4. **The larger square is made up of 16 smaller squares. What is the length of the sides of square "a"?**



$$\sqrt{121} = 11$$

$$11 \div 4 = 2.75$$

2.75'