Name:_____   **Date:**_____

Math 8 HW Section 7.1 – Squares and Square Roots

1. Circle all the perfect squares. Then write it as a square of another integer.

a) 0	b) 1	c) 10	d) 121	e) 7^2	f) 17
g) 25	h) 256	i) 120	j) 149	k) 64	l) 216
m) 94	n) 144	o) 145	p) 289	q) 391	r) 169

2. Find the Prime factorization for each of the following numbers:

   a) 24   d) 144   g) 320

   b) 1800   e) 240   h) 54

   c) 2000   f) 1600   i) 5400

3. Find the square root of each of the following numbers:

   a. $\sqrt{16}$ d) $\sqrt{81}$ g) $\sqrt{289}$
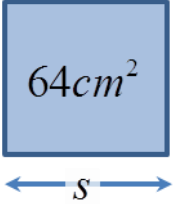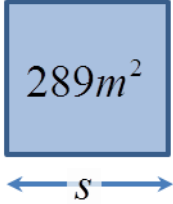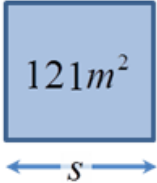
   b. $\sqrt{225}$ e) $\sqrt{361}$ h) $\sqrt{441}$

   c. $\sqrt{2\times2\times2\times2\times5\times5}$ f) $\sqrt{2\times2\times3\times3\times3\times3\times7\times7}$ i) $\sqrt{2\times2\times5\times5\times3\times3\times7\times7}$

4. Given the area of each of the square, find the side length.   Remember to indicate the units

a)	b)	c)
$64cm^2$ $\overleftarrow{}s\overrightarrow{}$	$289m^2$ $\overleftarrow{}s\overrightarrow{}$	$121m^2$ $\overleftarrow{}s\overrightarrow{}$

5. If 10 litres of paint can cover an area of 49 m^2. If a square is painted on a wall, what is the side length of the square?

6. If you have a rectangular frame that measure 50 cm by 60 cm, would you be able to put a square picture with an area of 2025 cm^2 inside the frame?

7. Mr. Young has a square rug that covers 3/8 of his living room. If his living room measures 12 ft by 18 ft, find the side length the rug.

8. The approximate speed of sound is dry air, c in meters, is related to temperature, t in degrees Celsius. The formula is given by $c = 20 \times \sqrt{(t+273)}$. What is the speed of sound at 16 degrees Celsius?

9. Mr. Cheong has a square garden that he would like to put a fence around. If his garden is 196 square feet, how much fence does he need?