Master 1.24

Lesson 1.1: Square Numbers and Area Models					
1.	Find the area of a square with each side length.a) 7 unitsb) 11 units				
2.	Show that 16 is a square number. Use a diagram, symbols, and words.				
3.	Which of these numbers is a perfect square? How do you know?				
	a) 14 b) 60 c) 36				
4.	These numbers are not square numbers.Which two consecutive square numbers is each number between?a) 7b) 30c) 50d) 90				
5.	• I am a two-digit square number. The sum of my digits is 13. What square number am I?				
6.	 A square patio has area 225 m². a) Find the dimensions of the patio. b) The owner wants to put lights around the patio. How many metres of lighting is needed? c) Each string of lights is 25 m long. How many strings of lights are needed? 				

Name	
------	--

Master 1.25 **Extra Practice 2** Lesson 1.2: Squares and Square Roots Find. 1. **a**) 6^2 **b**) 11² c) 5^2 Find a square root of each number. 2. **a**) 49 **b**) 64 **c)** 196 3. a) List the factors of each number in ascending order. Which numbers are squares? How do you know? **ii**) 144 **i**) 70 **iii**) 180 **b**) Find a square root of each square number in part a. 4. The factors of each number are listed in ascending order. Which numbers are square numbers? Find a square root of each square number. a) 216: 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 27, 36, 54, 72, 108, 216 **b**) 196: 1, 2, 4, 7, 14, 28, 49, 98, 196 **c)** 441: 1, 3, 9, 21, 49, 147, 441 5. Find a number whose square root is 24. **6.** Find the square root of each number. **a)** 12^2 **b**) 15^2 c) 37^2 7. Find the square of each number. a) $\sqrt{9}$ **b**) $\sqrt{121}$ **c**) $\sqrt{841}$



Master 1.27 **Extra Practice 4** Lesson 1.4: Estimating Square Roots 1. Use the number line below. a) Which placements are good estimates of the square roots? Explain your reasoning. **b**) Use the number line to estimate the value of each square root that is incorrectly placed. 56 49 a) Which two consecutive numbers is each square root between? How do you know? 2. **b**) Use guess and check to estimate the value of each square root to two decimal places. ii) $\sqrt{72}$ i) $\sqrt{15}$ iii) $\sqrt{110}$ iv) $\sqrt{41}$ **3.** Is each statement true or false? Explain. a) $\sqrt{19}$ is between 18 and 20. **b**) $\sqrt{101}$ is greater than 10. c) $\sqrt{5+10}$ is less than $\sqrt{5} + \sqrt{10}$. d) $\sqrt{3} \times \sqrt{8}$ is less than $\sqrt{36}$. e) $\sqrt{12} + \sqrt{10}$ is less than $\sqrt{32} - \sqrt{10}$. f) $\sqrt{1} + \sqrt{1} + \sqrt{1}$ is equal to $\sqrt{3}$. 4. Chess is played on a square board. A particular board has an area of about 3250 cm^2 . What are the approximate dimensions of the board to two decimal places? 5. A farmer has 600 m of fencing. He wants to enclose a square field of area 24 200 m². What are the approximate dimensions of the field? Give your answer to one decimal place. Does the farmer have enough fencing to enclose the field? Explain.

Name	D	ate





Name	
------	--

Master 1.29



Master 1.30)

