Name: _____ **8B** _____ **/ 18 Marks**

3.1 & 3.3 Assignment
Math 8

1. Find the **area** of a square with each side length. Remember to include units. (*2 marks)*

a) 17 cm = _____ **b)** 11 ft = _____

2. Show that 16 is a square number. Use a **factor tree** and **diagram**. (*2 marks*)

3. **Circle** the numbers that are **perfect squares**? (*2 marks*)

10, 16, 25, 32, 36, 50, 81, 94

Why are these numbers considered perfect squares? **Explain**:

_____

_____

_____

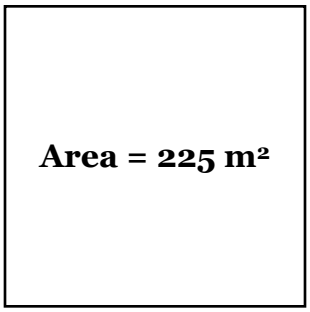
4. 30 is **not** a square number. Which two consecutive **square numbers** is it **between**? (*1 mark*)

_____ **and** _____

5. Simplify. (*4 marks*)

a) 5^2 = _____ **b)** $\sqrt{196}$ = _____ **c)** 8^2 = _____ **d)** $\sqrt{225}$ = _____

6. A square patio has area 225 m².



a) Find the dimensions of the patio. (*1 mark*)

b) The owner wants to put lights around the perimeter of the patio. How many metres of lighting is needed? (*1 mark*)

c) If each string of lights is 25 m long? How many strings of lights are needed? (*1 mark*)

7. The area A of a square is given. Find its **side length**. (2 marks)

a) $A = 169$ cm²

Side Length: _____

b) $A = 441$ mm²

Side Length: _____

8. Using the value below, state which two consecutive numbers the square root is **between** and **estimate** the value of the square root to **one decimal place** using the number line. (2 marks)

a) $\sqrt{110}$