Name: _____ Date: _____

BLM 4–6

Section 4.1 Extra Practice

1. Determine whether each of the following numbers is a perfect square, a perfect cube, both, or neither. Justify your choices mathematically.

a) 196

b) 200

c) 343

d) 625

e) 729

f) 3375

2. Evaluate using prime factorization.

a) $\sqrt{256}$

b) $\sqrt{225}$

c) $\sqrt[3]{1000}$

d) $\sqrt{1681}$

e) $\sqrt[3]{512}$

f) $\sqrt[3]{64}$

3. Evaluate.

a) $\sqrt{289}$

b) $\sqrt{1444}$

c) $\sqrt{3025}$

d) $\sqrt[3]{1728}$

e) $\sqrt[3]{5832}$

f) $\sqrt[3]{8000}$

4. The area of a square city block is 62 500 m^2. Calculate the length of a side.

5. Taylor needs to add a lace edge to a square tablecloth. The area of the cloth is 9 m^2. What length of edging does she need?

6. The surface area of a sphere is given by the formula $SA = 4\pi r^2$. If the surface area of a beach ball is 3600π cm^2, what is the radius of the ball?

7. A cubic aquarium for five sea lions has a volume of 216 m^3. Calculate the dimensions of the aquarium.

8. The volume of a cube is 125 cm^3. Calculate the total length of all the edges.

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