Name _____ Date _____

LESSON 20.2

Leveled Problem Solving
Areas of Triangles and Trapezoids

CA Standards AF 3.1 AF 3.2

For use with pages 537–544

Solve.

1. Manuel calculates the areas of triangles using the formula Area $= \frac{1}{2}bh$, where b is the base of the triangle and h is the corresponding height. For a triangle with a base of 6 m and a height of 4 m, he multiplies $\frac{1}{2} \times 6 \text{ m} \times 4 \text{ m}$. What is the triangle's area?

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2. Manuel's sister calculates the areas of trapezoids using the formula $Area = \frac{1}{2}(b_1 + b_2)$h, where b_1 and b_2 are the bases of the trapezoid and h is its height. For a trapezoid with bases of 3 cm and 5 cm and a height of 2 cm, she multiplies $\frac{1}{2} \times (3 \text{ cm} + 5 \text{ cm}) \times 2 \text{ cm}$. What is the trapezoid's area?

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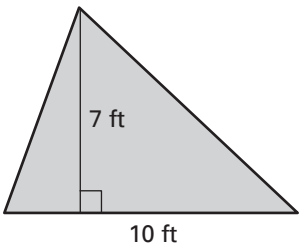
3. Gavin's bedroom is shaped like the triangle that is shown below. What is his bedroom's area?



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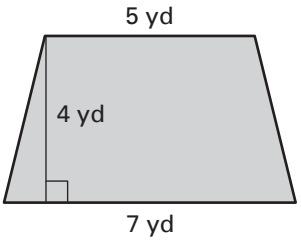
4. Maria's front yard is shaped like a trapezoid with the dimensions shown. What is the area of her front yard?



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5. The floor of Taylor's bathroom is covered with tiles in the shape of triangles. Each triangle has a height of 7 in. and a base of 12 in. If the floor of her bathroom has 40 tiles, what is the area of the bathroom floor?

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6. One side of the stage where Juan's drama club performs is shaped like a trapezoid with an area of 72 m^2. The trapezoid's two bases are 30 m and 42 m. What is the height of the trapezoid?

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