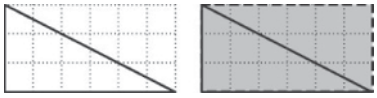
Name _____ Date _____ Class _____

LESSON 13-2

Area of Triangles

Reteach

To find the area of a triangle, first turn your triangle into a rectangle.



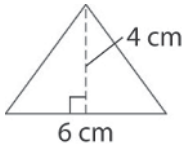
Next, find the area of the rectangle. $6 \bullet 3 = 18$ square units

The triangle is half the area of the formed rectangle or $A = \frac{1}{2}bh$, so

divide the product by 2.

$18 \div 2 = 9$ So, the area of the triangle is 9 square units.

Find the area of each triangle.

1. 

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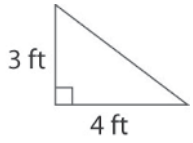
2. 

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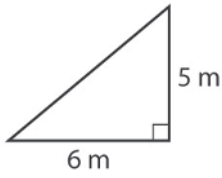
3. 

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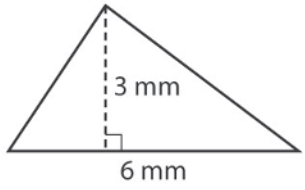
4. 

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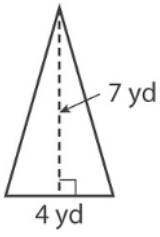
5. 

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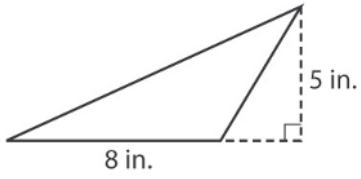
6. 

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5. You could change all the areas to one unit, say square inches, by multiplying square yards by 36×36 and square feet by 12×12. Then you could add the areas.
6. 18.7 cm^2
7. $\frac{9}{10}$ in^2
8. 23.25 cm^2
9. 8.4 in.

Practice and Problem Solving: D

1. 1.5 cm^2
2. 14 in^2
3. 16 m^2
4. 35 ft^2
5. 36 cm^2
6. 48 in^2
7. 28 ft^2
8. 84 ft^2
9. 600 yd^2

Reteach

1. 12 cm^2
2. 6 ft^2
3. 15 m^2
4. 9 mm^2
5. 14 yd^2
6. 20 in^2

Reading Strategies

1. Use the formula $A = \frac{1}{2}bh$.
2. Substitute 10 for b; Substitute 4 for h.
3. 20 in^2
4. 54 m^2
5. 4.5 ft^2
6. Use the same formula but substitute for area and base in the second and third steps. Then solve for the height.

Success for English Learners

1. No, as long as both sides (base and height) meet at a right angle.
2. because of the Associative Property of Multiplication
3. 16 ft^2

LESSON 13-3

Practice and Problem Solving: A/B

1. $600 = \frac{1}{2}b(20)$; The base is 60 ft.
2. $1{,}224 = \frac{1}{2}h\left(70\frac{1}{2} + 65\frac{1}{2}\right)$; The height of the countertop is 18 in.
3. The width of the tabletop 3 ft.
4. The base is 30 cm.
5. The width of the door is 9 ft.

Practice and Problem Solving: C

1. 56 front frames
2. $77.97
3. 20 cm and 5 cm
4. 225 yd
5. 120 triangular pieces

Practice and Problem Solving: D

1. 5 in.
2. $525 = \frac{1}{2}h(30 + 40)$; 15 ft
3. 14 in.
4. 20 in.
5. 5 cm
6. 3 ft

Reteach

1. 10 m
2. 18 cm
3. 8 in.
4. 2 yd
5. 8 mm

Reading Strategies

1. 5 in.
2. 6 cm

Success for English Learners

1. Write the formula for the area of the figure.
2. Substitute in known variables and solve for the missing variable.