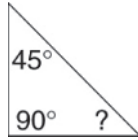Name _____ Date _____ Class _____

Angle Theorems for Triangles

Practice and Problem Solving: A/B

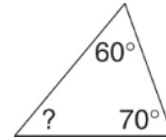**Find the unknown angle measure in each triangle. Choose the letter for the best answer.**
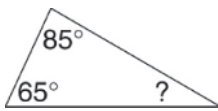
1.

45°
90°   ?

A 45°	C 90°
B 55°	D 135°

2.

60°
?   70°

A 40°	C 60°
B 50°	D 70°

Find the unknown angle measure in each triangle.
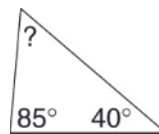
3.

85°
65°   ?

_____

4.

104°
?   30°

_____

5.

?
85°   40°

_____

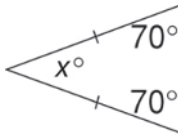**Find the value of the variable in problems 6–8.**

6.

70°
x°
70°

_____

7.

y°
55°   60°

_____

8.

n°   n°
50°

_____
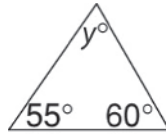
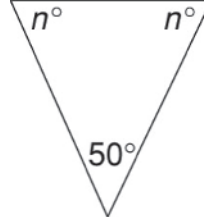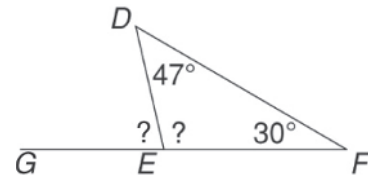**Use the diagram at the right to answer each question below.**

9. What is the measure of ∠DEF?

_____

10. What is the measure of ∠DEG?
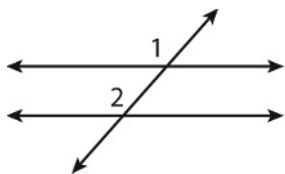
_____

D
47°
? ?   30°
G   E   F

11. A triangular sign has three angles that all have the same measure. What is the measure of each angle?
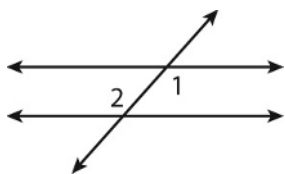
_____

Reading Strategies

1. Check students' work. A pair of corresponding angles should be labeled 1 and 2.

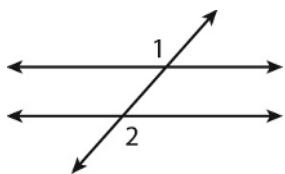   Sample answer:

2. Check students' work. A pair of alternate interior angles should be labeled 1 and 2.

   Sample answer:

3. Check students' work. A pair of alternate exterior angles should be labeled 1 and 2.

   Sample answer:

Success for English Learners

1. $\angle 1$ and $\angle 5$, $\angle 2$ and $\angle 6$, $\angle 3$ and $\angle 7$, $\angle 4$ and $\angle 8$

2. $\angle 3$ and $\angle 6$, $\angle 4$ and $\angle 5$

3. $\angle 1$ and $\angle 8$, $\angle 2$ and $\angle 7$

LESSON 11-2

Practice and Problem Solving: A/B

1. A
2. B
3. $30°$
4. $46°$
5. $55°$
6. $x = 40°$
7. $y = 65°$
8. $n = 65°$
9. $103°$
10. $77°$
11. $60°$

Practice and Problem Solving: C

1. $x = 59°$
2. $n = 46°$
3. $t = 60°$
4. $w = 31°$
5. $x = 50°$
6. $x = 30°$
7. $180 = (4x - 9) + (4x - 9) + x;$ base angles $= 79°$; vertex angle $= 22°$
8. $180 = 2x + \dfrac{x}{4}$; base angles $= 80°$; vertex angle $= 20°$
9. $180 = x + 2x + 3x$; $30°, 60°, 90°$

Practice and Problem Solving: D

1. $55°$
2. $136°$
3. $74°$
4. $16°$
5. $40°$
6. $112°$
7. $103°$
8. $68°$
9. $82°$
10. $x = 65°$
11. $y = 40°$
12. $r = 30°$

Reteach

1. $55s + 72° = 127°$; $180° - 127° = 53°$; $53°$
2. $82° + 53° = 135°$; $180° - 135° = 45°$; $45°$
3. $y = 150°$
4. $150°$; $30°$

Reading Strategies

1. $40°$
2. $75°, 65°, 40°$
3. $75°$

Success for English Learners

1. $x = 80°$
2. $x = 58°$