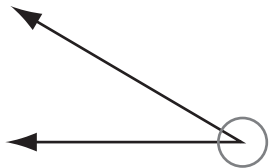# Investigating Angles
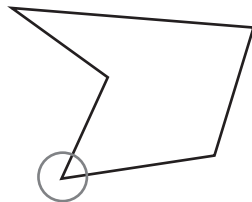
Tell whether each marked angle looks *acute*, *right*, or *obtuse*.
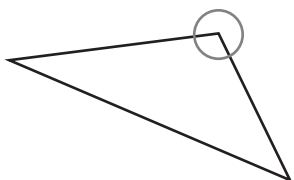
1

_____

2

_____

3

_____

4

_____
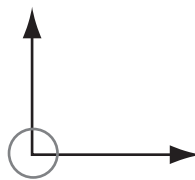
5

_____

6

_____

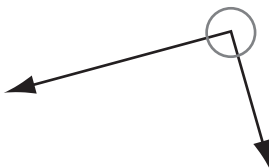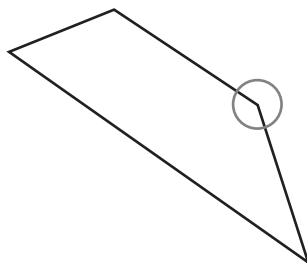## Test Prep

7 14 × 288 = 4,032. Which of the following is false?
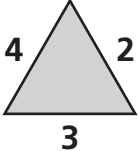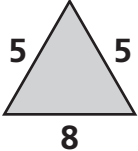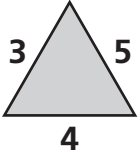
A. 1.4 × 2.88 = 4.032

B. 14 × 28.8 = 403.2

C. 1.4 × 28.8 = 40.32

D. 0.14 × 0.288 = 0.4032

8 26 × 317 = 8,242. Which of the following is false?
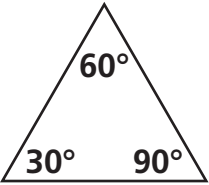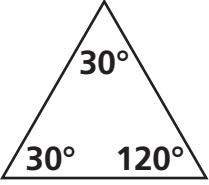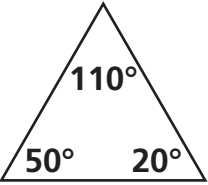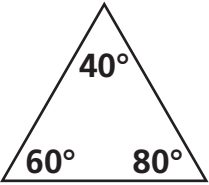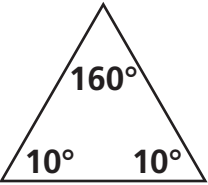
A. 2.6 × 3.17 = 8.242

B. 0.26 × 0.317 = 0.8242

C. 2.6 × 31.7 = 82.42

D. 26 × 31.7 = 824.2

Classifying Angles and Triangles

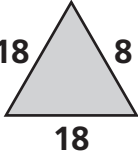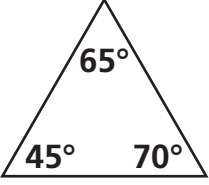**1** Classify each triangle by the lengths of its sides or measures of its angles. Be as specific as possible. The measurements tell how the triangles **should** be drawn, but the pictures are not correct. Do not judge anything by the way it looks.

	Scalene	Isosceles	Equilateral
A			
B		X	
C			
D			
E			
F			

A 4 / 2 / 3

B 5 / 5 / 8

C 6.3 / 6.3 / 6.3

D 18 / 8 / 18

E 3 / 5 / 4

F 1.9 / 1.9 / 1.2

G 60° 30° 90°

H 30° 30° 120°

I 110° 50° 20°

J 65° 45° 70°

K 40° 60° 80°

L 160° 10° 10°

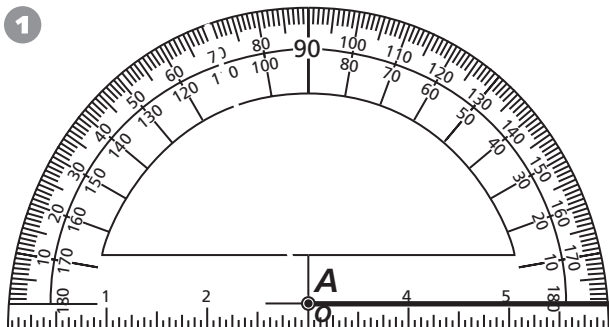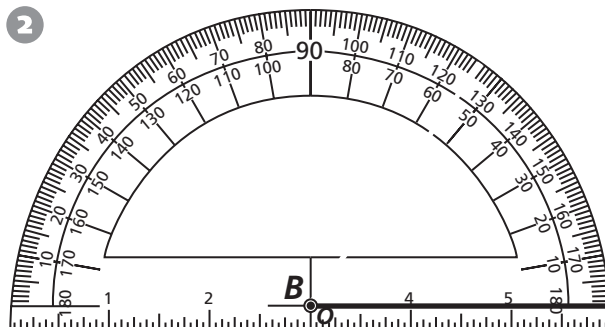|	Acute	Obtuse	Right
G			
H			
I			
J			
K			
L			

Test Prep

2 In the theater, there are 20 rows of seats with 15 seats in each row. If 155 adults and 76 children attend a performance at the theater, how many seats will be empty? Explain how you know.

_____

_____

_____

Constructing Triangles

Use a straightedge to draw a line to make the angles.

1

measure of ∠**A**: 110°

2

measure of ∠**B**: 55°

3

measure of ∠**C**: 20°

4
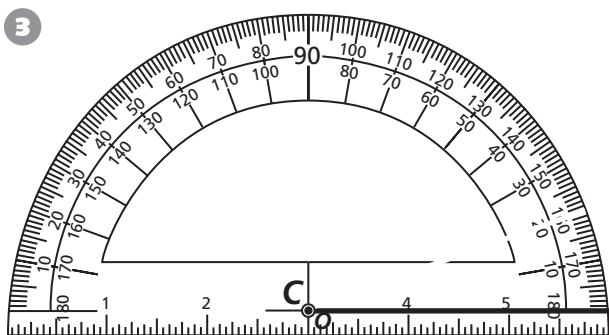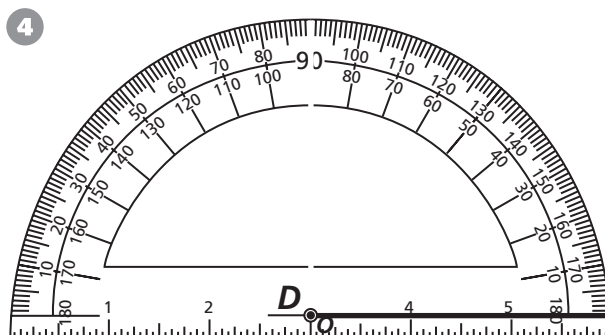
measure of ∠**D**: 90°

Test Prep

5 Which is a reasonable way to approximate the value of 42.319 − 19.8?

A. 42 − 20

B. (42 − 19) + (319 − 8)

C. 42,319 − 198

D. 423 − 198

6 Which is a reasonable estimate for 13.079 × 4.82?

A. 130

B. 65

C. 480

D. 18

Constructing Similar Triangles

Use a straightedge to draw a line to make the angles.

1

measure of ∠A: 100°

2

measure of ∠B: 45°

3

measure of ∠C: 90°
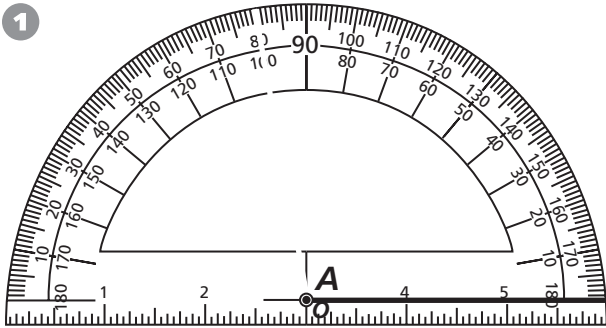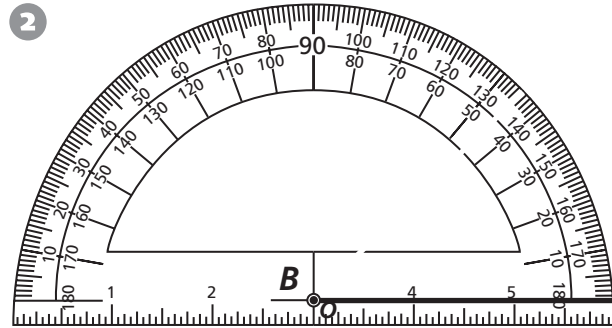
4
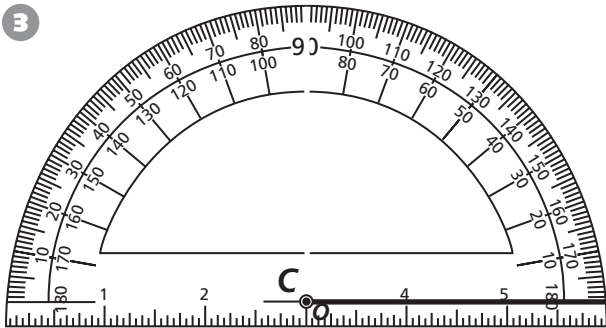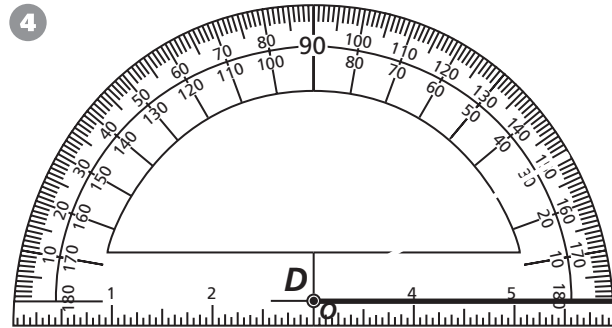
measure of ∠D: 30°

Record the angle measures.

5

G ☐
25° F   H 90°

6

J 95°
65° L   K ☐
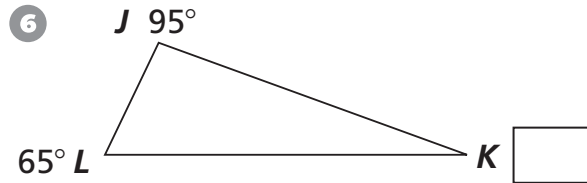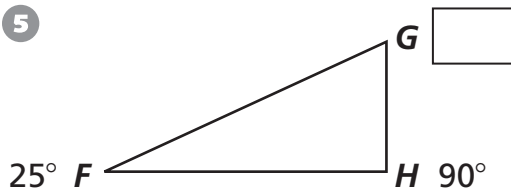
Test Prep

7 Maria drew a right triangle. She said one angle was right, one angle was acute, and one angle was obtuse. Is this possible? Explain how you know.

_____

_____

_____

_____

Angles Formed by Intersecting Lines

**Use your knowledge of straight angles and opposite angles to find the missing angle measures.
(No protractors, please!)**

1

60° 50°

2

50°

70°
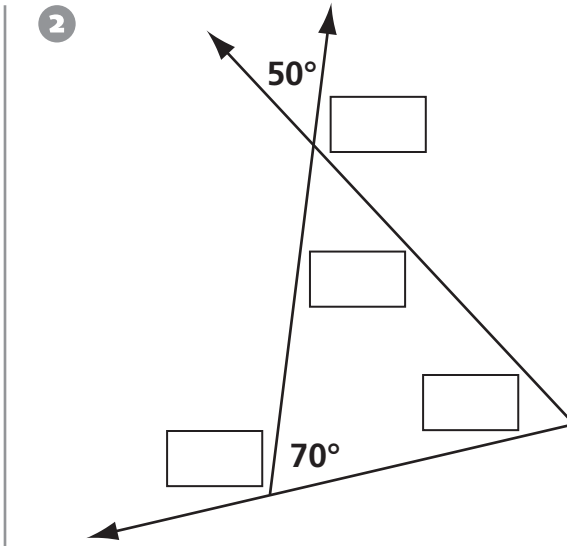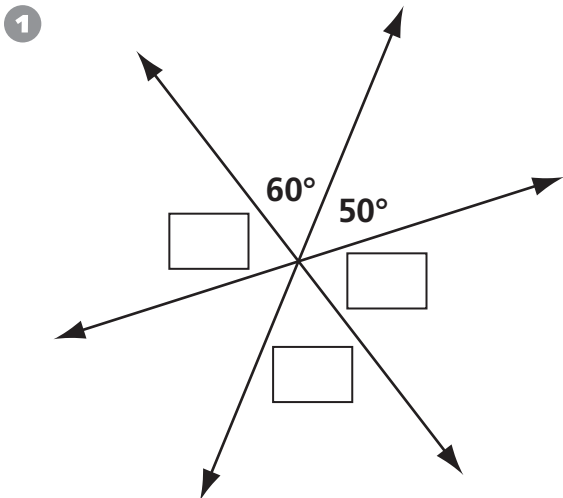
Test Prep

3 Read, but do NOT solve this problem.

There are 36 students to seat in the library. If each table holds 8 students, what is the fewest number of tables needed for all to sit?

If there is a remainder, what should you do about it? Explain.

_____

_____

_____

_____

Angles Formed by a Line Intersecting Parallel Lines

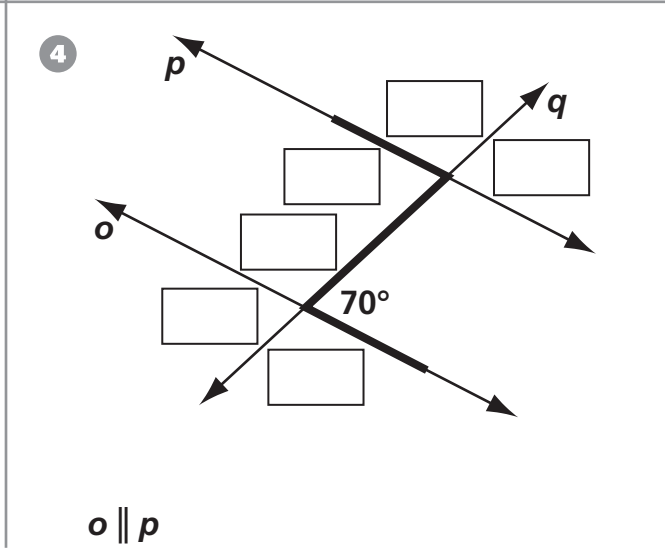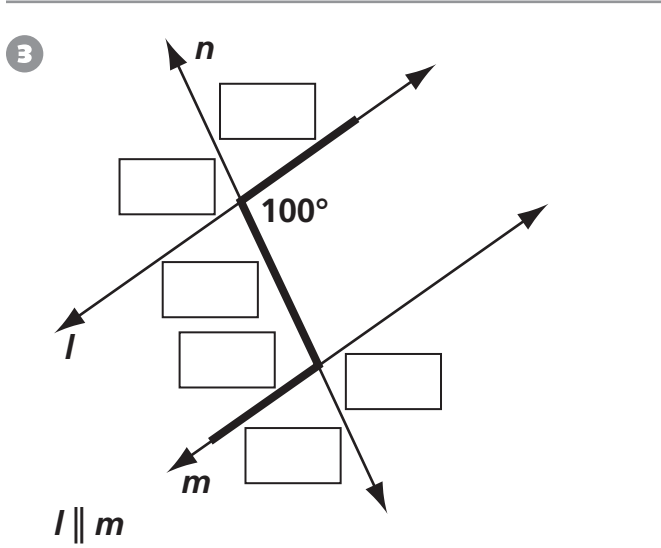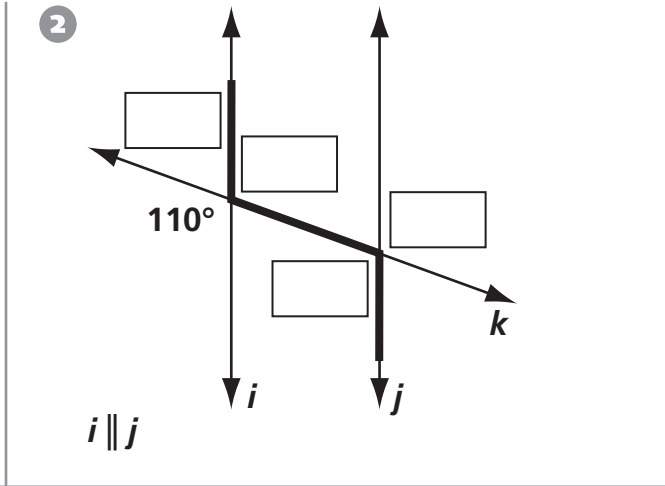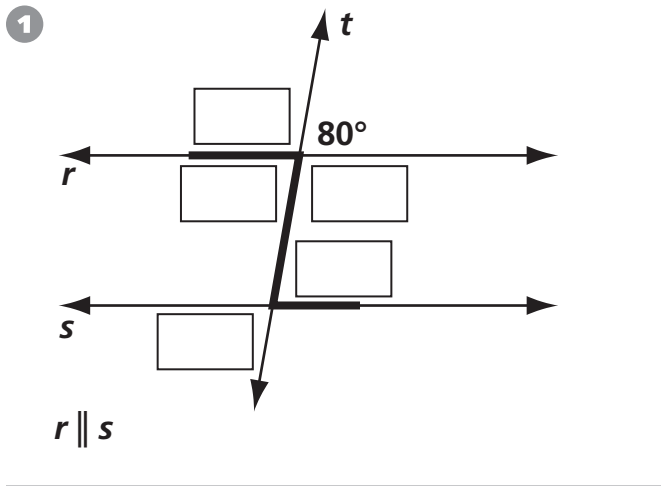**Without using a protractor, use your knowledge about Zs, straight angles, and opposite angles to figure out the missing angle measures. Do you see other Zs?**

1

80°

t

r

s

r ∥ s

2

110°

i ∥ j

i   *j*   *k*

3

n

100°

l

m

l ∥ m

4

p

q

o

70°

o ∥ p

Test Prep

5 Which of the following is NOT true?

A. $x + y + z = 180°$

B. If $x = 90°$, then $y + z = 90°$

C. If $x = 90°$, then $y = 90° - z$

D. $x + y + z = 90°$

y   *x*

z
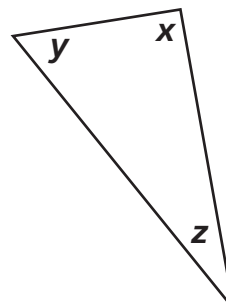
Comparing and Classifying Quadrilaterals

Congruent sides and angles have the same markings.
Circle ALL the names that match each quadrilateral.

1

rectangle   parallelogram

trapezoid   rhombus

2

square   rhombus

rectangle   parallelogram

3

rhombus   rectangle

square   parallelogram

4

parallelogram   rhombus

rectangle   square

Test Prep

5 In △RST, the measure of ∠S is 40° and the measure of ∠T is 50°. What is the measure of ∠R? Explain how you know.
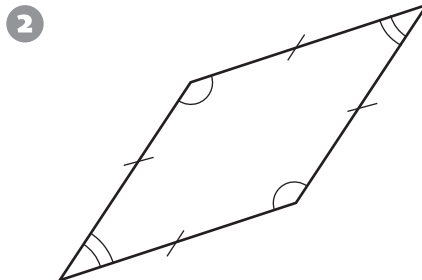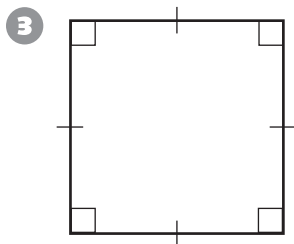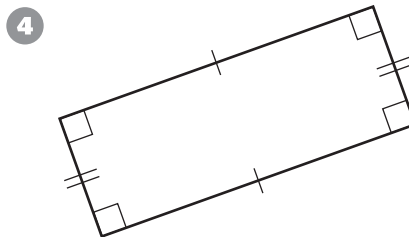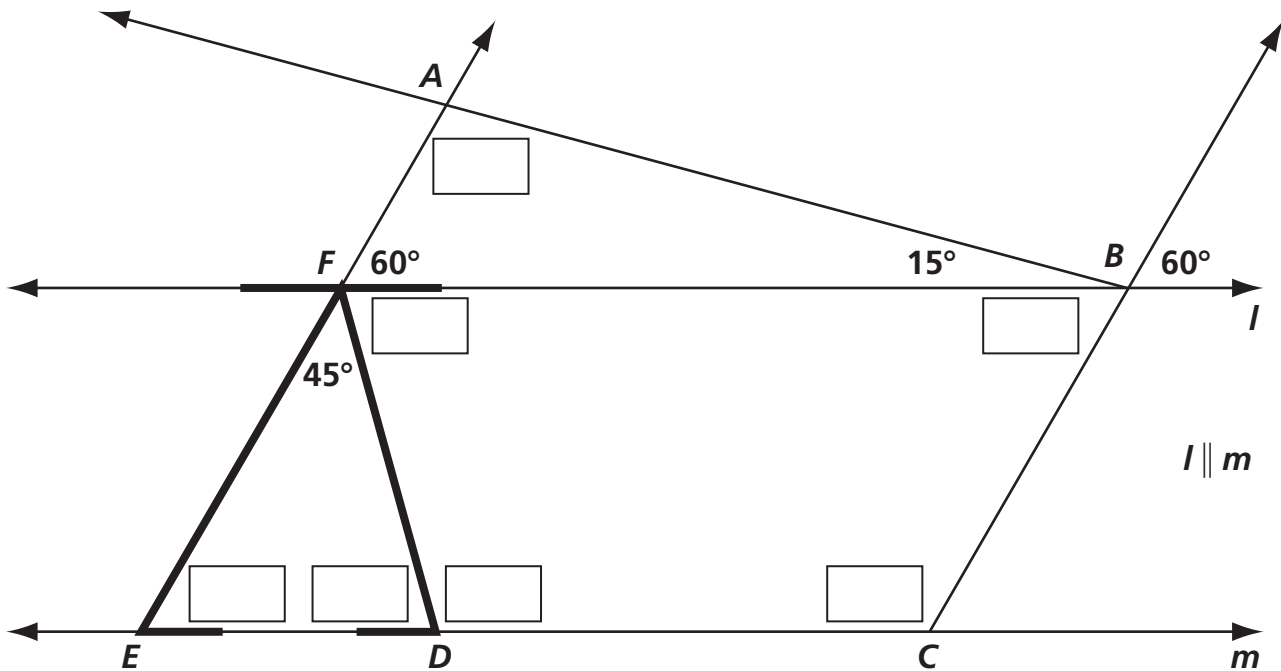
_____

_____

_____

Investigating Quadrilaterals

Without using a protractor, use your knowledge about Zs, straight angles, opposite angles, and the sum of the measures of the angles in triangles and quadrilaterals to find the missing measurements.

1

Test Prep

2 A triangle with sides measuring 3 cm, 5 cm, and 3 cm must be:

   A. isosceles

   B. acute

   C. scalene

   D. equilateral

3 A certain quadrilateral has only 2 lines of symmetry, 2 pairs of parallel sides, and 4 right angles. It must be a:

   A. square

   B. rhombus

   C. rectangle

   D. trapezoid