

Answers

6.7 Start Thinking!

For use before Lesson 6.7

Sample answer: Some factors you must consider are interest rate or if the bank charges a fee for a minimum balance.

6.7 Warm Up

For use before Lesson 6.7

- a. \$45 b. \$795 2. a. \$36 b. \$336
- a. \$280 b. \$1680 4. a. \$189 b. \$789
- a. \$22 b. \$572 6. a. \$21 b. \$1221

6.7 Practice A

- a. \$30 b. \$230 2. a. \$120 b. \$870
- a. \$80 b. \$1680 4. a. \$30 b. \$530
- 2% 6. 7% 7. 3 years 8. 1.5 years
- \$367.50 10. \$1400 11. \$4200 12. 18 years
- a. \$300 b. \$3300
- a. \$3360 b. \$140 c. credit card
- a. \$1296 b. \$1399.68

6.7 Practice B

- a. \$332.80 b. \$2932.80
- a. \$1593.75 b. \$76,593.75
- 4.75% 4. 6.5% 5. 6 months 6. 3 years
- \$35,000 8. \$7800 9. 9% 10. 10%
- a. \$1208.10 b. \$1220.18 c. \$1228.11
d. \$28.11 e. 2.3%
- 8%

6.7 Enrichment and Extension

- If she gets \$500 off, the total cost would be \$21,320.57. If she decreases the interest rate, the total cost would be \$21,519.48. It would be better to get \$500 off.
- The total cost would be \$22,278.63. When interest is compounded more often, the total cost increases, which means that the lender is making more money.
- Answer should include, but is not limited to:* The student must include the car's original price, the interest rate, how often the interest is compounded, the total cost of the loan, and the monthly payment.

6.7 Puzzle Time

ARE YOU ASLEEP

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- 273 2. 10 3. 27
- 67.5 5. 300 6. 700
- 15.5 8. 400 9. 5
- \$5,200

Chapter 7

7.1 Start Thinking!

For use before Activity 7.1

An acute angle is an angle whose measure is less than 90° . An obtuse angle is an angle whose measure is greater than 90° and less than 180° . *Sample answer:* Acute can mean sharp and obtuse means dull. An acute angle has a sharp point and an obtuse angle does not.

7.1 Warm Up

For use before Activity 7.1

- right 2. obtuse 3. acute 4. straight

7.1 Start Thinking!

For use before Lesson 7.1

Sample answer:



Adjacent angles are angles that are next to each other. They share a common side and have the same vertex.

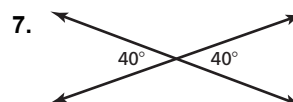
7.1 Warm Up

For use before Lesson 7.1

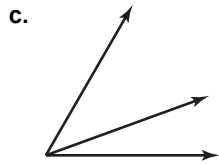
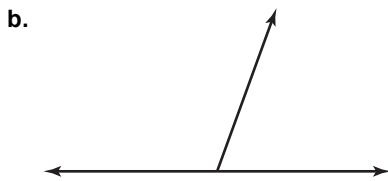
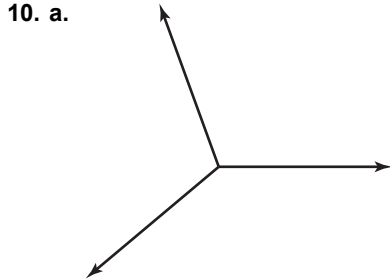
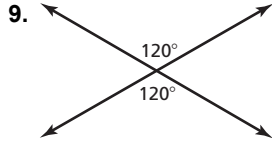
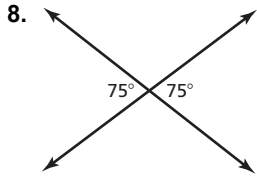
- $\angle ABC$ and $\angle EBD$ measure 50° .
 $\angle CBD$ and $\angle ABE$ measure 130° .
- $\angle CBD$ and $\angle ABE$

7.1 Practice A

- Sample answer:* adjacent: $\angle ABE$ and $\angle EBD$;
 $\angle ABC$ and $\angle CBD$; vertical: $\angle ABE$ and $\angle CBD$;
 $\angle ABC$ and $\angle EBD$
- Sample answer:* adjacent: $\angle NHG$ and $\angle GHI$;
 $\angle JHK$ and $\angle KHL$; vertical: $\angle GHI$ and $\angle KHL$;
 $\angle IHJ$ and $\angle NHL$
- adjacent; 148 4. vertical; 142
- adjacent; 18 6. vertical; 26



Answers



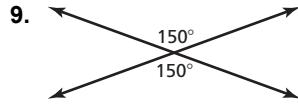
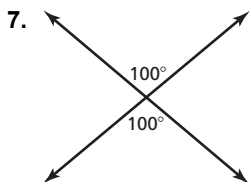
11. $\angle 1 = 48^\circ$,
 $\angle 2 = 132^\circ$,
 $\angle 3 = 48^\circ$

7.1 Practice B

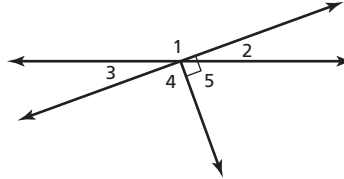
- Sample answer: adjacent: $\angle IED$ and $\angle DEF$;
 $\angle FEG$ and $\angle GEH$; vertical: $\angle DEF$ and $\angle GEH$;
 $\angle FEG$ and $\angle DEH$
- Sample answer: adjacent: $\angle SUT$ and $\angle SUZ$;
 $\angle XUY$ and $\angle WUX$; vertical: $\angle SUZ$ and $\angle WUX$;
 $\angle YUZ$ and $\angle VUW$

3. adjacent; 123 4. adjacent; 10

5. adjacent; 45 6. vertical; 30



10. Sample answer:

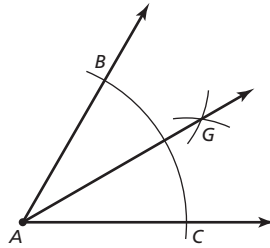


11. 75°

7.1 Enrichment and Extension

1. Angle A is an acute angle.

2-5.



6. Angle BAC measures 60° . Each angle formed from the bisection measures 30° .

7.1 Puzzle Time

A SNEAKER

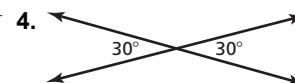
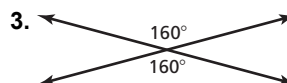
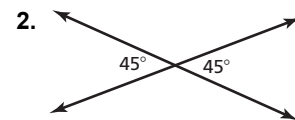
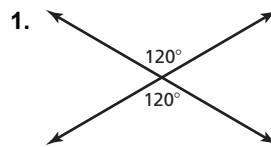
7.2 Start Thinking!

For use before Activity 7.2

Sample answer: Two angles are adjacent angles when they share common sides and have the same vertex. Two angles are vertical angles when they are opposite angles formed by the intersection of two lines. Vertical angles are congruent angles, meaning they have the same measure.

7.2 Warm Up

For use before Activity 7.2



Answers

7.2 Start Thinking!

For use before Lesson 7.2

complementary; supplementary; Answers will vary.
Sample answers: A letter S is like two Cs put together, so the sum of supplementary angles is twice as much as complementary angles. "It's *right* to give a *compliment*." C comes before S in the alphabet and 90 comes before 180 on a number line.

7.2 Warm Up

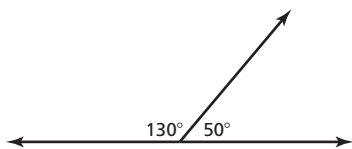
For use before Lesson 7.2

- sometimes; x may be acute or obtuse.
- always; y must be between 0° and 90° .
- never; If $x = 90^\circ$ and $y < 90^\circ$, then $x + y < 180^\circ$.
- sometimes; The sum $x + y$ could be any value between 90° and 270° .

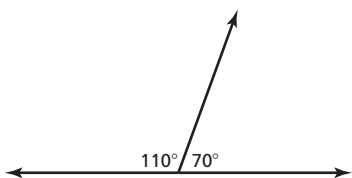
7.2 Practice A

- sometimes; y could be right, acute, or obtuse.
- never; x must be between 0° and 90° .
- complementary
- neither
- neither
- supplementary
- angle x : 52° ; angle y : 38°
- complementary; $x = 5$
- supplementary; $x = 20$

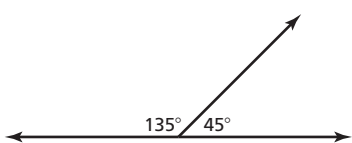
10.



11.



12.



13. complementary: 45° ; supplementary: 90°

7.2 Practice B

- neither
- complementary
- supplementary
- supplementary
- supplementary; $x = 11$
- complementary; $x = 6$
- 60°
- $x = 5; y = 5$
- a. $x + c = 90$ b. $x + s = 180$

7.2 Enrichment and Extension

- 130°
- 50°
- 50°
- 30°
- 70°
- 50°
- 60°
- 40°
- 40°
- 50°
- 50°
- 130°
- 140°
- 40°
- 140°

7.2 Puzzle Time

LEAP YEAR

7.3 Start Thinking!

For use before Activity 7.3

Sample answer: A yield sign is an equilateral triangle.

7.3 Warm Up

For use before Activity 7.3

- 1–6. Check students' work.

7.3 Start Thinking!

For use before Lesson 7.3

90° ; *Sample answer:* Begin by drawing the angle with measure 30° . Then draw the second angle of 60° off one of the rays. Measure the third angle. The third angle measure is 90° .

7.3 Warm Up

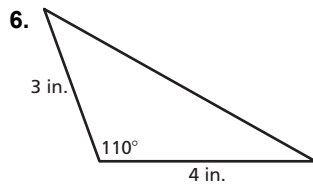
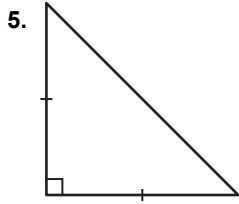
For use before Lesson 7.3

- 1–4. Check students' work.

7.3 Practice A

- equiangular, equilateral, acute
- obtuse, scalene
- right, scalene
- isosceles, acute

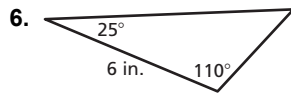
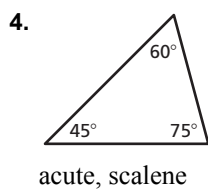
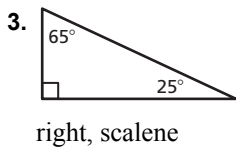
Answers



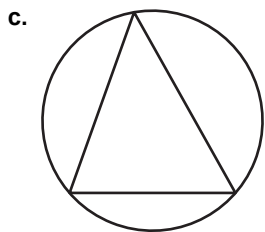
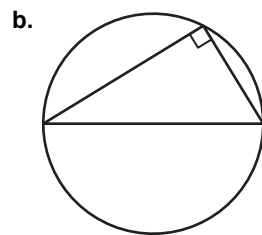
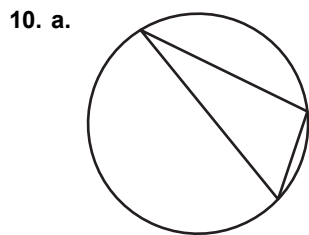
7. a. 45, 90, 45
 b. Every triangle has one 90° angle and two 45° angles.
 c. An isosceles right triangle has two 45° angles.

7.3 Practice B

1. acute, isosceles 2. obtuse, scalene

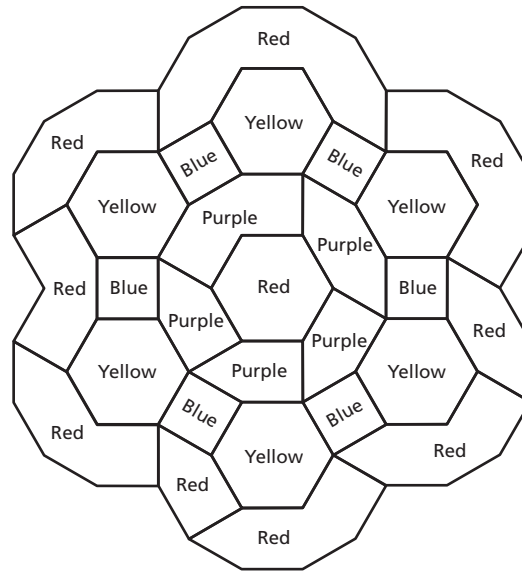


7. one triangle; Only one triangle can be drawn with a 2-inch side, 4-inch side, and 5-inch side.
 8. no triangles; None of the sides of a scalene triangle are equal.
 9. many triangles; The other two sides of the triangle can be many different lengths.



7.3 Enrichment and Extension

1. $\frac{4}{5}$ 2. $\frac{12}{5}$ 3. $\frac{3}{5}$
 4. $\frac{4}{3}$ 5. $\frac{12}{13}$ 6. $\frac{5}{13}$



7.3 Puzzle Time

SHE WANTED TO LEARN TO READ BETWEEN THE LIONS

Extension 7.3 Start Thinking!

For use before Extension 7.3

Sample answer: construction, bridge building

Extension 7.3 Warm Up

For use before Extension 7.3

1. acute, isosceles 2. right, isosceles
 3. obtuse, scalene 4. obtuse, isosceles
 5. right, scalene
 6. equilateral, equiangular, acute

Extension 7.3 Practice

1. $x = 102$; obtuse, scalene
 2. $x = 60$; equiangular, equilateral, acute
 3. $x = 28$; isosceles, obtuse
 4. $x = 12$; right, scalene
 5. $x = 45$; right, isosceles
 6. $x = 22.5$; isosceles, obtuse
 7. yes

Answers

8. no; 24.9° , 121.4° , 33.7°
9. a. 60° , 60° , 60°
- b. equiangular, equilateral, acute
- c. *Sample answer:* 110° , 35° , 35° ; isosceles, obtuse
- d. *Sample answer:* 40° , 70° , 70° ; isosceles, acute
- e. Two of its angles are equal.

7.4 Start Thinking!

For use before Activity 7.4

Sample answer: quadrennial (occurring every 4 years), quadriceps (4 part muscle at the front of the thigh), quadrilingual (can speak 4 languages), quadruped (animal with 4 feet), quadruple (4 times as great), quadruplets (4 children born of one pregnancy), quad (4-wheeled all-terrain vehicle); quad- means four.

7.4 Warm Up

For use before Activity 7.4

1. trapezoid 2. parallelogram 3. square
4. rectangle 5. triangle 6. pentagon

7.4 Start Thinking!

For use before Lesson 7.4

Sample answer: square, rectangle, rhombus, parallelogram, trapezoid, kite; Check students' sketches.

7.4 Warm Up

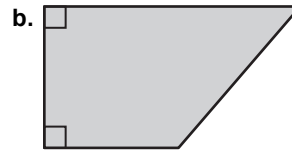
For use before Lesson 7.4

1. rhombus 2. square 3. rectangle
4. parallelogram 5. trapezoid 6. kite

7.4 Practice A

1. kite 2. rectangle 3. trapezoid
4. parallelogram 5. 56°
6. 110° 7. always
8. sometimes 9. never 10. never

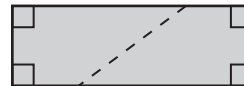
11. a. not possible; There would have to be another right angle because two sides are parallel.



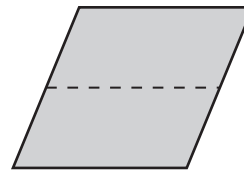
- c. not possible; The sum of the measure of the angles is 360° , so the fourth angle would be a right angle. So it would be a square, not a trapezoid.
- d. not possible; A trapezoid has two sides that are not parallel.

7.4 Practice B

1. rhombus 2. trapezoid 3. 112°
4. 125° 5. sometimes 6. always
7. never 8. sometimes
9. a. false; The width needs to be half the length.
- b. true; Each square has side length 10 inches.
- c. true; Each rhombus has side length 3 feet.
- d. true; *Sample answer:*



- e. true; *Sample answer:*



7.4 Enrichment and Extension

1. triangle; 60° 2. octagon; 135°
3. pentagon; 108° 4. hexagon; 120°
5. nonagon; 140° 6. decagon; 144°

7.4 Puzzle Time

VITAMIN BEE

7.5 Start Thinking!

For use before Activity 7.5

Sample answer: The architect drew the building to scale. If the contractor does not build to the same scale as the architect used, the building will not go together correctly.

Answers

7.5 Warm Up

For use before Activity 7.5

1. $x = 24$
2. $x = 10$
3. $x = 20$
4. $x = 28$
5. $x = 80$
6. $x = 81$

7.5 Start Thinking!

For use before Lesson 7.5

Sample answer: You must first determine the scale. You will also need to use a measuring device to measure the distance you will be traveling. Then you need to convert the scale distance to actual distance.

7.5 Warm Up

For use before Lesson 7.5

1. 28 ft
2. 42 ft
3. 120 ft
4. 7.6 ft
5. 160 ft
6. 1700 ft

7.5 Practice A

1. a. 24 ft b. 8 ft by 4 ft c. 8 ft by 8 ft
d. 33. $\bar{3}$ % e. 3 : 4 f. 1 : 2 g. no h. 33. $\bar{3}$ %
2. 15 ft 3. 35 m 4. 4 yd 5. 2.5 cm
6. a. 1 in. : 0.5 ft b. $\frac{1}{6}$

7.5 Practice B

1. a. 12 ft by 20 ft b. 8 ft by 6 ft c. 14 ft d. 8 : 7
e. 1 : 1; They both have the same number of squares.
f. closet g. both the same h. 144 ft²
2. 25 km 3. 12.5 in. 4. 9.6 ft 5. 13 m
6. should be model : actual; $\frac{1}{8} = \frac{x \text{ ft}}{48 \text{ ft}}$
 $x = 6 \text{ ft}$

7.5 Enrichment and Extension

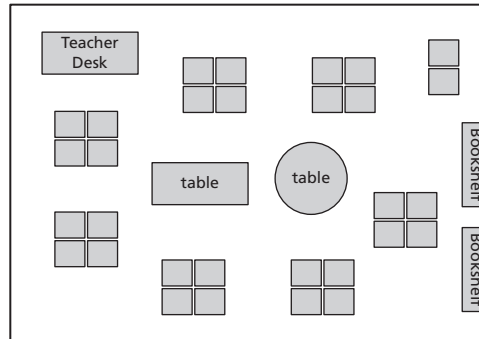
Answer should include, but is not limited to: The drawing should fit on the grid and a scale should be included. All items should be drawn to scale, and their lengths should be labeled.

7.5 Puzzle Time

MICE CUBES

Technology Connection

1. *Sample answer:*



2. *Answer should include, but it not limited to:* aspects of design such as sufficient walking space, teacher accessibility to all desks, ability or inability to see a particular chalkboard, ease of collaboration among peers, etc.

Chapter 8

8.1 Start Thinking!

For use before Activity 8.1

Check students' piems.

8.1 Warm Up

For use before Activity 8.1

1. 24 m
2. 40 cm
3. 36 yd
4. 120 ft
5. 16 in.
6. 60 mm

8.1 Start Thinking!

For use before Lesson 8.1

Sample answer: The circumference of a tree trunk is easier to measure. Unless the tree is cut down, you do not have access to the circular cross section in order to measure the diameter. The diameter of a quarter is easier to measure. You only need a ruler to measure across the quarter. In general, it is usually easier to measure the diameter of a circular object. The circumference is easier to measure only when you cannot access the diameter to measure it.

8.1 Warm Up

For use before Lesson 8.1

1. about 37.68 in.
2. about 12.56 ft
3. about 22 cm
4. about 62.8 ft
5. about 44 mm
6. about 3.14 in.

8.1 Practice A

1. 30 ft
2. 4 m
3. 32 mm
4. 5 cm
5. 12 in.
6. 3.5 yd