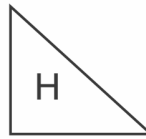
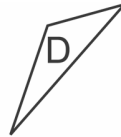
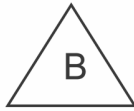


**Lesson 1: Congruent Figures**

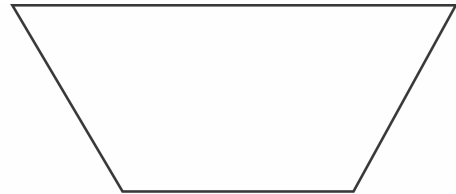
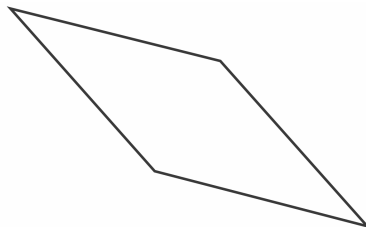
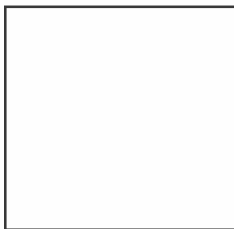
1. Which of these triangles are congruent?



2. Nancy has three figures.  
She wants to find out if the figures are congruent.  
Explain how she can do this.

**Lesson 2: Exploring Angles**

1. Look at the angles in each of these figures.  
Which angles are obtuse, acute, or right angles. How do you know?



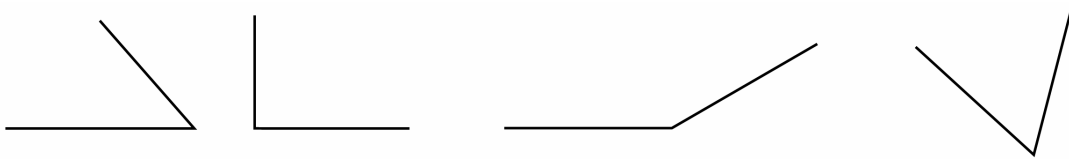
2. Use a 6-division protractor to measure the angle between the leg of your desk and the floor.  
Is this angle a right angle, an acute angle, or an obtuse angle?

3. Give an example of a place in your classroom where you might find a right angle.

## Extra Practice 2

### Lesson 3: Measuring Angles

1. Measure the following angles with a protractor.



2. Draw an angle that measures greater than each angle in Question 1.  
Draw an angle that measures less than each angle in Question 1.
3. a) Estimate which of angle A or angle B is greater.



- b) Measure angle A and angle B.  
c) Which angle is greater? How does your answer compare with your estimate? Show your work.

### Lesson 4: Exploring Sides in Quadrilaterals

1. Which quadrilaterals have 2 pairs of parallel sides and opposite sides equal?
2. Find 10 different examples of quadrilaterals in your school.  
Sketch each quadrilateral and cut it out.  
Sort the quadrilaterals according to side length.

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Master 3.37

## Extra Practice 3

### Lesson 5: Exploring Angles in Quadrilaterals

1. Which quadrilaterals have one or more right angles?
2. Draw 4 quadrilaterals that have different angles. Measure the angles in each figure you drew.

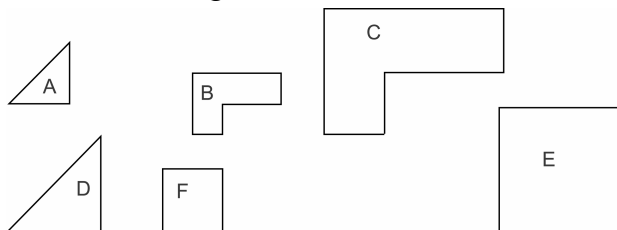
### Lesson 6: Attributes of Quadrilaterals

1.
  - a) Draw a quadrilateral that has 1 right angle.
  - b) Draw a quadrilateral that has 2 right angles.
  - c) Can you draw a quadrilateral with 3 right angles? Use words and pictures to explain your thinking.
2.
  - a) Draw a quadrilateral that has no parallel sides.
  - b) Draw a quadrilateral that has 2 pairs of parallel sides.
  - c) Draw a quadrilateral that has 4 congruent sides.
  - d) How many different quadrilaterals can you draw for part b?  
For part c?

## Extra Practice 4

### Lesson 7: Similar Figures

1. Here are 6 figures.



Which figures are congruent? Which figures are similar? Explain your thinking.

2. a) Are rectangles A and B similar? How do you know?



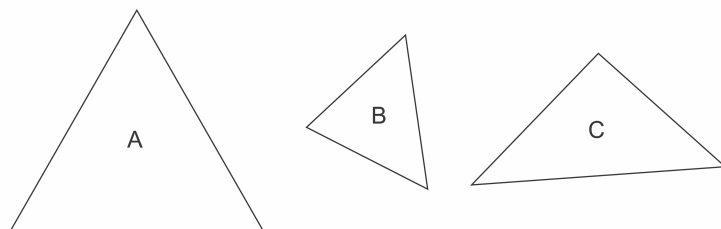
b) Draw a new rectangle similar to rectangle A and rectangle B.

### Lesson 7A: Exploring Triangles

1. Here are 3 triangles.

Label each triangle as isosceles, equilateral, or scalene.

Which triangle has no lines of symmetry? How do you know?



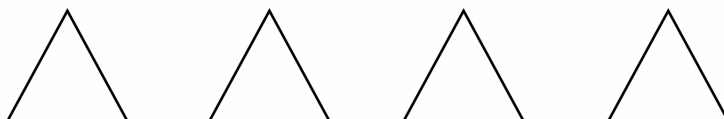
2. Draw a picture that uses 3 isosceles, 3 equilateral, and 3 scalene triangles. Label each triangle.

## Extra Practice 5

### Lesson 8: Faces of Solids

1. Aislinn sketched the faces of some solids. Name the solids she sketched.

a)



b)



2. a) Name 2 solids that have faces that are congruent figures. Sketch all of the faces for these solids.

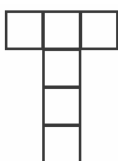
b) Name the congruent faces.

### Lesson 8A: Exploring Nets of Solids

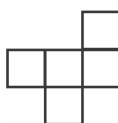
1. Which pictures are nets of a cube?

How do you know?

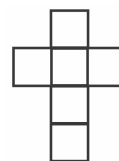
a)



b)

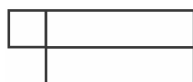


c)



2. Complete this picture to make a net for a rectangular prism.

How many different ways can you do this?



Master 3.40

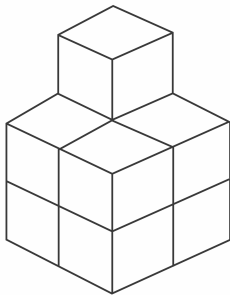
## Extra Practice 6

### Lesson 9: Solids in Our World

1. Name the solid that best represents each item.
  - a) the classroom door
  - b) a fir tree
  - c) a piece of chalk
  
2.
  - a) Name a solid that has 2 circular faces.
  - b) Name a solid that has 4 vertices and some faces that are congruent triangles.
  - c) Name a solid that has 6 vertices and some faces that are congruent triangles.

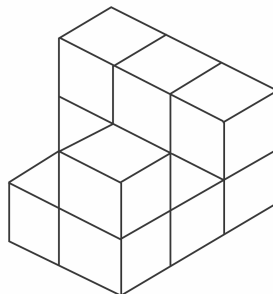
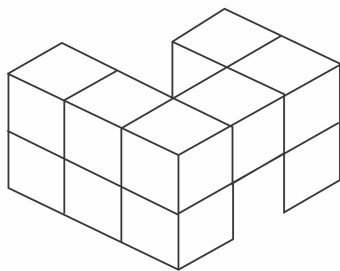
### Lesson 9A: Constructing Solids from Drawings

1. Build this solid.



- a) How many cubes did you use?
- b) How many cubes are on the bottom layer?  
How do you know?

2. Here are 2 drawings of the same solid.  
Build the solid. Which picture is most helpful?  
Explain.



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## Extra Practice 7

### Lesson 10: Designing a Skeleton

1. Can the skeleton of a solid have fewer than 8 edges?  
Explain your thinking.
2. Suppose a toothpick represents an edge of a solid, and a marshmallow represents a vertex.  
How many toothpicks and marshmallows would you need to make the skeleton of a pentagonal prism?  
  
A pentagonal-based pyramid?
3. What do you think is the most common skeleton used when building a skyscraper?

**Master 3.42**

**Answers**

**Extra Practice 1 – Master 3.35**

**Lesson 1**

1. A and E, B and G, C and F
2. She can use tracing paper to trace her figures, and then compare them.

**Lesson 2**

1. Orange square: all angles are right angles.  
Tan rhombus: 2 angles are obtuse. 2 angles are acute.  
Red trapezoid: 2 angles are obtuse. 2 angles are acute.
2. Student should measure this angle to be about a right angle.
3. For example, a right angle is formed where the floor meets the wall.

**Extra Practice 2 – Master 3.36**

**Lesson 3**

1.  $50^\circ$ ,  $90^\circ$ ,  $150^\circ$ ,  $62^\circ$
2. 4 angles: one more than  $50^\circ$ , one more than  $90^\circ$ , one more than  $150^\circ$ , one more than  $62^\circ$
3. **b)**  $60^\circ$ ,  $60^\circ$   
**c)** The angles are equal.

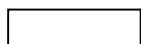
**Lesson 4**

1. Square, rectangle, rhombus, parallelogram
2. Students should try to find examples of different quadrilaterals.

**Extra Practice 3 – Master 3.37**

**Lesson 5**

1. Square, rectangle
2. For example,



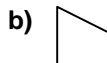
Rectangle: angles are all  $90^\circ$  (or right angles).



Parallelogram: the larger angle is about  $120^\circ$ , the smaller angle is about  $60^\circ$ .

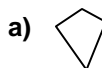
**Lesson 6**

1. For example,



- c)** No, a quadrilateral with 3 right angles must also have a fourth right angle, or it will not close.

2. For example,



- b)** A square, rhombus, parallelogram, rectangle  
**c)** Square or rhombus  
**d)** 4, 2

**Extra Practice 4 – Master 3.38**

**Lesson 7**

1. No figures are congruent; none have the same size.  
A and D, B and C, and E and F are similar; they have the same shape.
2. **a)** Yes. They have the same shape and each side of rectangle B is twice the length of the corresponding side of rectangle A.  
**b)** For example, a rectangle 6 by 3

**Lesson 7A**

1. A: equilateral  
B: isosceles  
C: scalene  
Triangle C is a scalene triangle with no lines of symmetry. I could trace the triangle, and then fold it to see if it has any lines of symmetry.
2. Student answer should include a picture containing 9 triangles: 3 equilateral, 3 isosceles, and 3 scalene. Each triangle should be labelled.

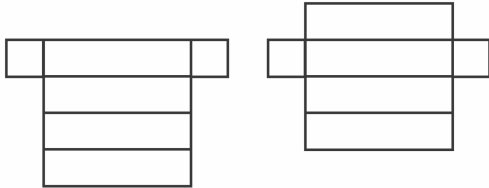
**Extra Practice 5 – Master 3.39**

**Lesson 8**

1. **a)** Triangular pyramid  
**b)** Triangular prism
2. For example, triangular pyramid (4 congruent triangles), cube (6 congruent squares)

**Lesson 8A**

1. The pictures in parts a and c are nets of a cube.  
I can cut out each net and fold it to make a cube. In part b, the picture only has 5 squares.  
A cube has 6 faces, so a net for a cube must have 6 squares.
2. Possible nets:



**Extra Practice 6 – Master 3.40**

**Lesson 9**

1. a) Rectangular prism  
b) Triangular prism  
c) Cylinder
2. a) Cylinder  
b) Triangular pyramid  
c) Triangular prism

**Lesson 9A**

1. a) 9                      b) 4
2. The second picture is more helpful, because it shows the solid with all of the cubes on the upper layer being supported by cubes on the bottom layer.

**Extra Practice 7 – Master 3.41**

**Lesson 10**

1. Yes: triangular pyramid
2. Pentagonal prism: 15 toothpicks,  
10 marshmallows  
Pentagonal pyramid: 10 toothpicks,  
6 marshmallows
3. Rectangular prism



