



A Story of Units

Pleasanton
UNIFIED SCHOOL DISTRICT

Mathematics Curriculum



Grade 2 • MODULE 8

Time, Shapes, and Fractions as Equal Parts of Shapes

Homework

Video tutorials: <http://embarc.online>

Info for parents: <http://bit.ly/pusdmath>

Version 3



Table of Contents

GRADE 2 • MODULE 8

Time, Shapes, and Fractions as Equal Parts of Shapes

Module Overview..... i

Topic A: Attributes of Geometric Shapes 8.A.1

Topic B: Composite Shapes and Fraction Concepts 8.B.1

Topic C: Halves, Thirds, and Fourths of Circles and Rectangles 8.C.1

Topic D: Application of Fractions to Tell Time..... 8.D.1

Module Assessments.....8.S.1

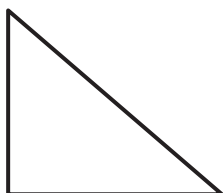
NOTE: Student sheets should be printed at 100% scale to preserve the intended size of figures for accurate measurements. Adjust copier or printer settings to *actual size* and set page scaling to *none*.

Name _____

Date _____

1. Identify the number of sides and angles for each shape. Circle each angle as you count, if needed.

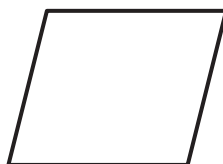
a.



_____ sides

_____ angles

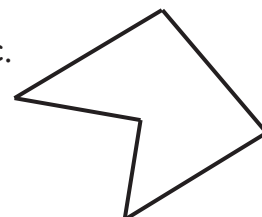
b.



_____ sides

_____ angles

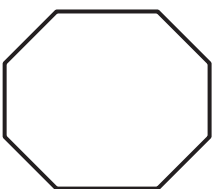
c.



_____ sides

_____ angles

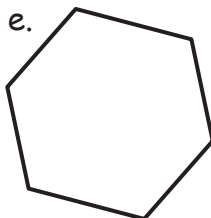
d.



_____ sides

_____ angles

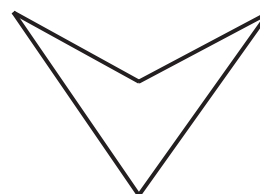
e.



_____ sides

_____ angles

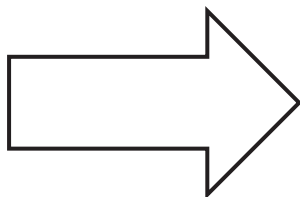
f.



_____ sides

_____ angles

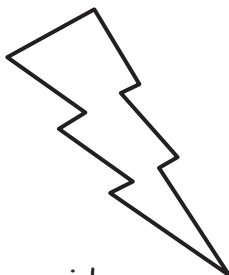
g.



_____ sides

_____ angles

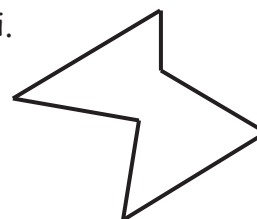
h.



_____ sides

_____ angles

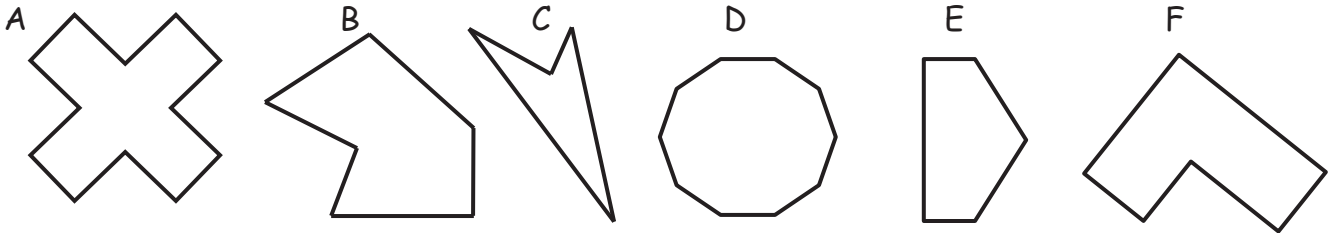
i.



_____ sides

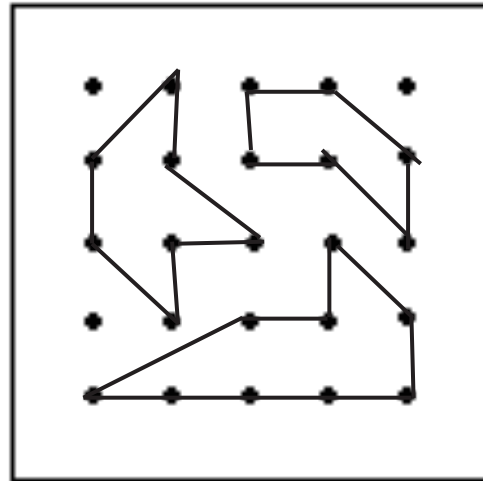
_____ angles

2. Study the shapes below. Then, answer the questions.



- Which shape has the most angles? _____
- Which shape has 4 more angles than shape F? _____
- Which shape has 5 fewer sides than shape D? _____
- How many more angles does shape A have than shape B? _____
- Which of these shapes have the same number of sides and angles? _____

3. Joseph's teacher said to make shapes with 6 sides and 6 angles on his geoboard. Shade the shapes that share these attributes, and circle the shape that does not belong. Explain why it does not belong.



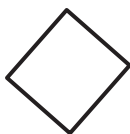
Name _____

Date _____

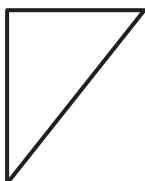
1. Count the number of sides and angles for each shape to identify each polygon. The polygon names in the word bank may be used more than once.

| | | | |
|---------|---------------|----------|----------|
| Hexagon | Quadrilateral | Triangle | Pentagon |
|---------|---------------|----------|----------|

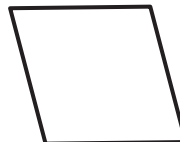
a.



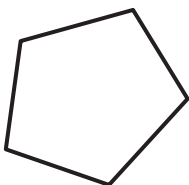
b.



c.



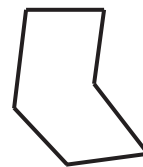
d.



e.



f.



g.



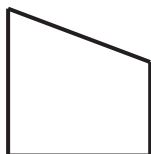
h.



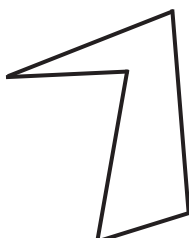
i.



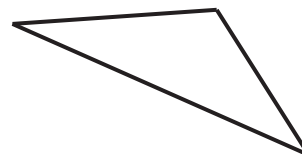
j.



k.



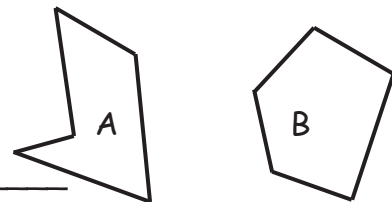
l.



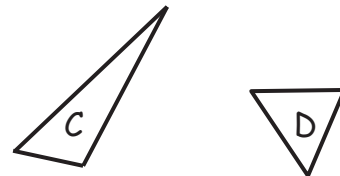
2. Draw more sides to complete 2 examples of each polygon.

| | Example 1 | Example 2 |
|---|-----------|-----------|
| <p>a. Quadrilateral</p> <p>For each example, ___ lines were added.</p> <p>A quadrilateral has ___ total sides.</p> | | |
| <p>b. Pentagon</p> <p>For each example, ___ lines were added.</p> <p>A pentagon has ___ total sides.</p> | | |
| <p>c. Triangle</p> <p>For each example, ___ line was added.</p> <p>A triangle has ___ total sides.</p> | | |
| <p>d. Hexagon</p> <p>For each example, ___ lines were added.</p> <p>A hexagon has ___ total sides.</p> | | |

3. Explain why both polygons A and B are pentagons.



4. Explain why both polygons C and D are triangles.



Name _____

Date _____

1. Use a straightedge to draw the polygon with the given attributes in the space to the right.

a. Draw a polygon with 4 angles.

Number of sides: _____

Name of polygon: _____

b. Draw a six-sided polygon.

Number of angles: _____

Name of polygon: _____

c. Draw a polygon with 3 angles.

Number of sides: _____

Name of polygon: _____

d. Draw a five-sided polygon.

Number of angles: _____

Name of polygon: _____

2. Use your straightedge to draw 2 new examples of each polygon that are different from those you drew on the first page.

a. Quadrilateral

| | |
|--|--|
| | |
|--|--|

b. Hexagon

| | |
|--|--|
| | |
|--|--|

c. Pentagon

| | |
|--|--|
| | |
|--|--|

d. Triangle

| | |
|--|--|
| | |
|--|--|

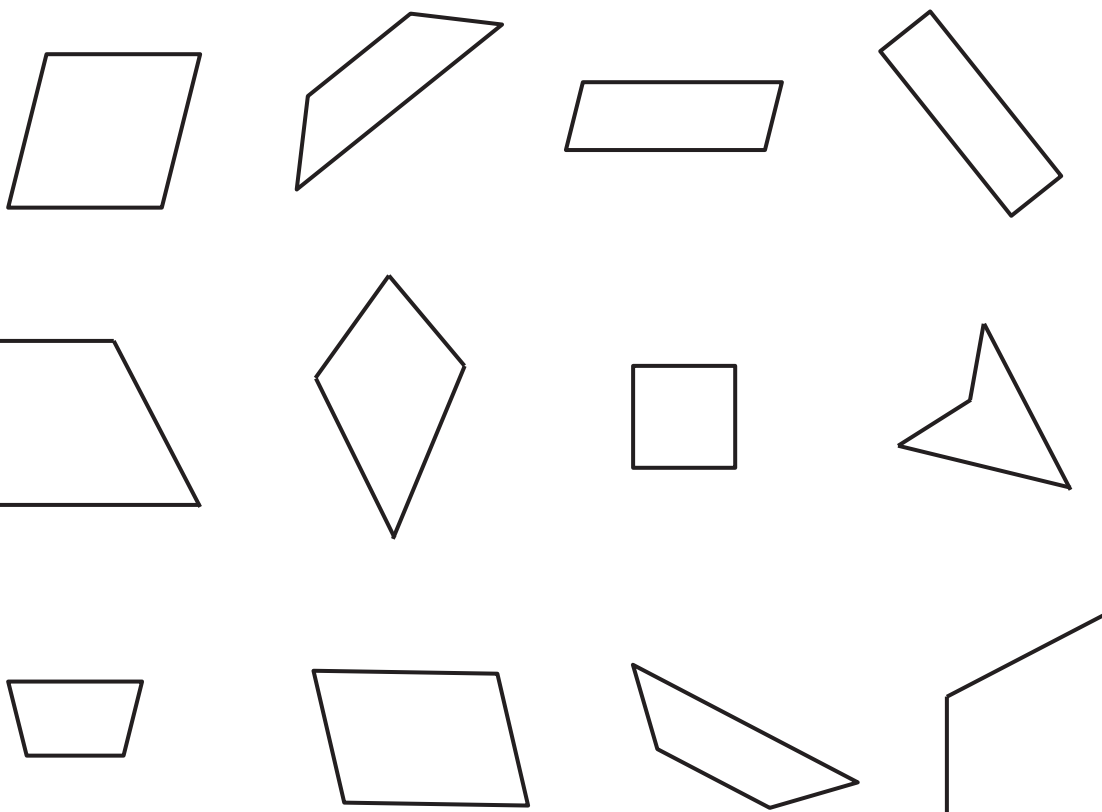
Name _____

Date _____

1. Use your ruler to draw 2 parallel lines that are not the same length.
2. Use your ruler to draw 2 parallel lines that are the same length.
3. Draw a quadrilateral with two sets of parallel sides. What is the name of this quadrilateral?
4. Draw a quadrilateral with 4 square corners and opposite sides the same length. What is the name of this quadrilateral?

5. A square is a special rectangle. What makes it special?

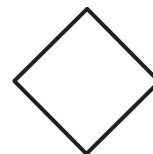
6. Color each quadrilateral with 4 square corners and two sets of parallel sides red.
Color each quadrilateral with no square corners and no parallel sides blue.
Color each quadrilateral with one or more sets of parallel sides green.



Name _____

Date _____

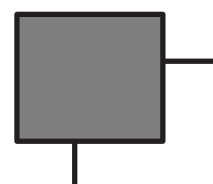
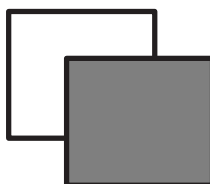
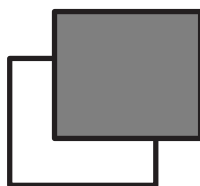
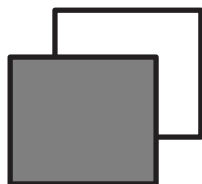
1. Circle the shapes that could be the face of a cube.



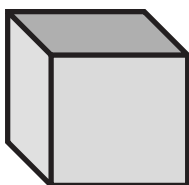
2. What is the most precise name of the shape you circled? _____
3. How many corners does a cube have? _____
4. How many edges does a cube have? _____
5. How many faces does a cube have? _____
6. Draw 6 cubes, and put a star next to your best one.

| | |
|------------|-------------|
| First cube | Second cube |
| Third cube | Fourth cube |
| Fifth cube | Sixth cube |

7. Connect the corners of the squares to make a different kind of drawing of a cube.



8. Patricia used the image of the cube below to count 7 corners. Explain where the 8th corner is hiding.



Name _____

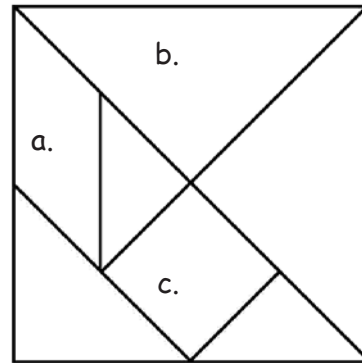
Date _____

1. Identify each polygon labeled in the tangram as precisely as possible in the space below.

a. _____

b. _____

c. _____



2. Use the square and the two smallest triangles to make the following polygons. Draw them in the space provided.

a. A triangle with 1 square corner.

b. A quadrilateral with 4 square corners.

c. A quadrilateral with no square corners.

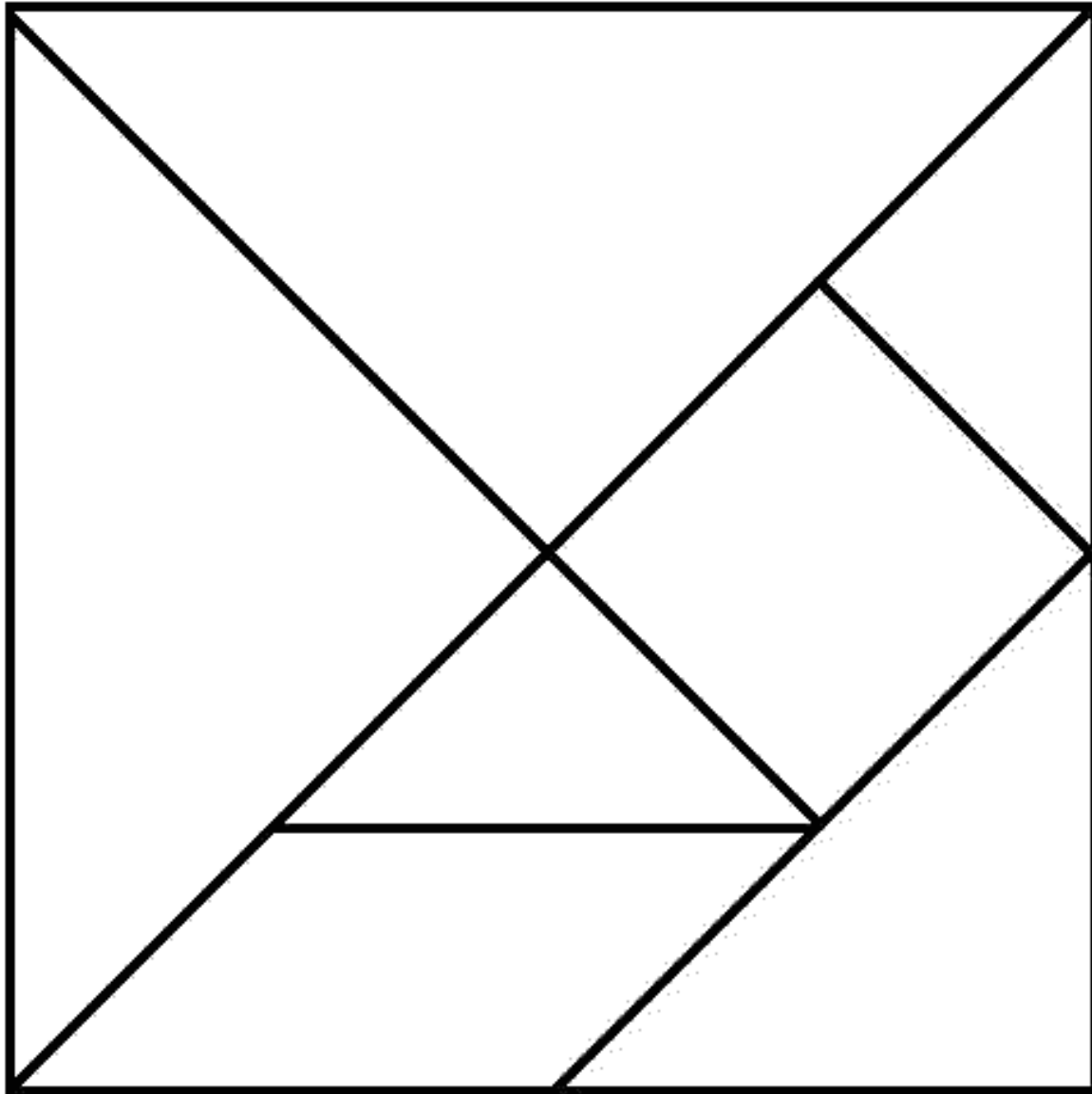
d. A quadrilateral with only 1 pair of parallel sides.

3. Rearrange the parallelogram and the two smallest triangles to make a hexagon. Draw the new shape below.

4. Rearrange your tangram pieces to make at least 6 other polygons! Draw and name them below.

| | |
|--|--|
| | |
| | |
| | |

Cut out the tangram into 7 puzzle pieces.



tangram



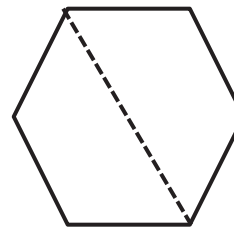
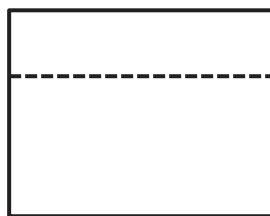
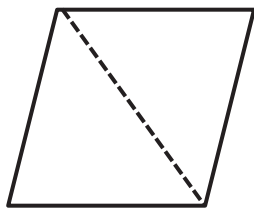
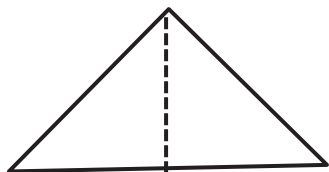
Name _____

Date _____

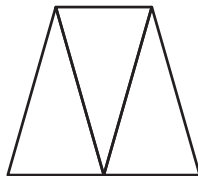
1. Solve the following puzzles using your tangram pieces. Draw your solutions in the space below.

| | |
|---|--|
| a. Use the two largest triangles to make a square. | b. Use the two smallest triangles to make a square. |
| c. Use the two smallest triangles to make a parallelogram with no square corners. | d. Use the two smallest triangles to make one larger triangle. |
| e. How many equal shares do the larger shapes in Parts (a-d) have? | f. How many halves make up the larger shapes in Parts (a-d)? |

2. Circle the shapes that show halves.

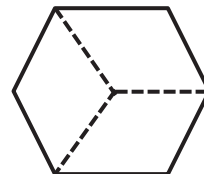
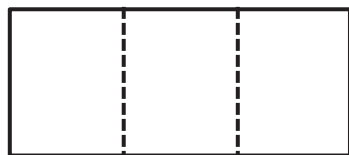


3. Examine the trapezoid.

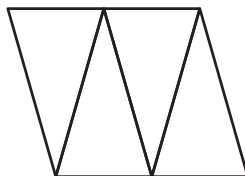


- a. How many equal shares does the trapezoid have? _____
- b. How many thirds are in the trapezoid? _____

4. Circle the shapes that show thirds.

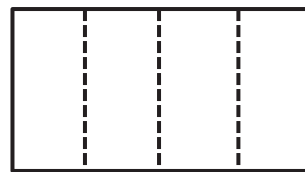
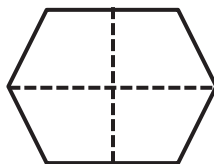
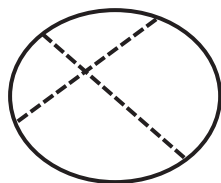


5. Examine the parallelogram.



- a. How many equal shares does the shape have? _____
- b. How many fourths are in the shape? _____

6. Circle the shapes that show fourths.

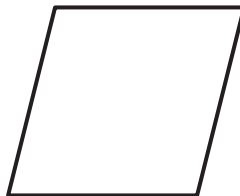


Name _____

Date _____

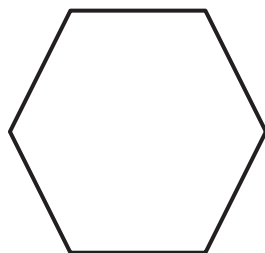
1. Name the pattern block used to cover half the rhombus. _____

Sketch the 2 pattern blocks used to cover both halves of the rhombus.



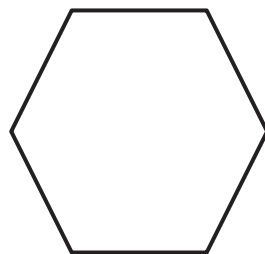
2. Name the pattern block used to cover half the hexagon. _____

Sketch the 2 pattern blocks used to cover both halves of the hexagon.



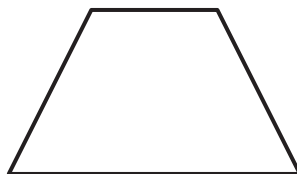
3. Name the pattern block used to cover 1 third of the hexagon. _____

Sketch the 3 pattern blocks used to cover thirds of the hexagon.



4. Name the pattern block used to cover 1 third of the trapezoid. _____

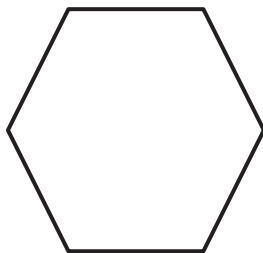
Sketch the 3 pattern blocks used to cover thirds of the trapezoid.



5. Draw 2 lines to make 4 squares in the square below.



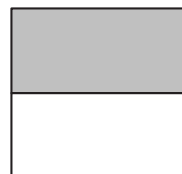
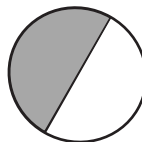
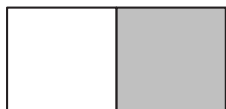
- a. Shade 1 small square. Each small square is 1 _____ (half / third / fourth) of the whole square.
- b. Shade 1 more small square. Now, 2 _____ (halves / thirds / fourths) of the whole square are shaded.
- c. And 2 fourths of the square is the same as 1 _____ (half / third / fourth) of the whole square.
- d. Shade 2 more small squares. _____ fourths is equal to 1 whole.
6. Name the pattern block used to cover 1 sixth of the hexagon. _____
Sketch the 6 pattern blocks used to cover 6 sixths of the hexagon.



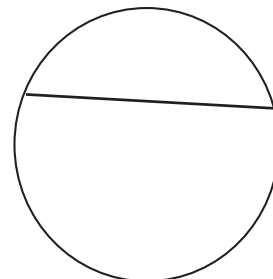
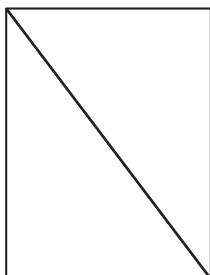
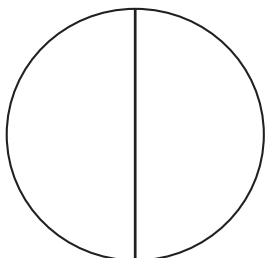
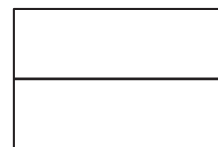
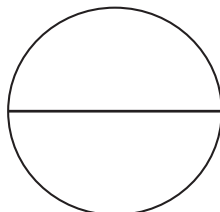
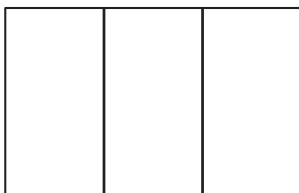
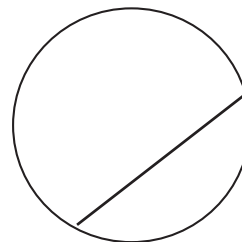
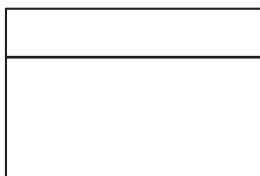
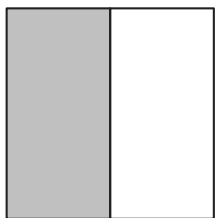
Name _____

Date _____

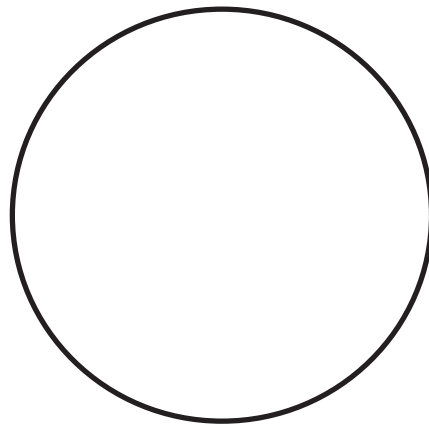
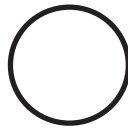
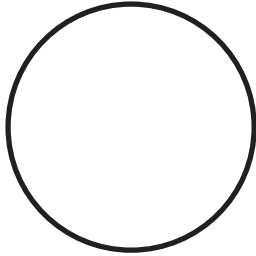
1. Circle the shapes that have 2 equal shares with 1 share shaded.



2. Shade 1 half of the shapes that are split into 2 equal shares. One has been done for you.



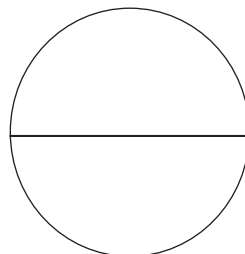
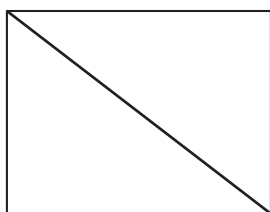
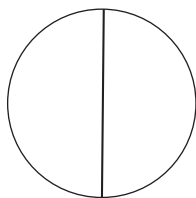
3. Partition the shapes to show halves. Shade 1 half of each.



Name _____

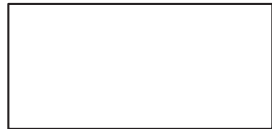
Date _____

1. Do the shapes below show halves or thirds? _____



Draw 1 more line to partition each shape above into fourths.

2. Partition each rectangle into thirds. Then, shade the shapes as indicated.



2 thirds

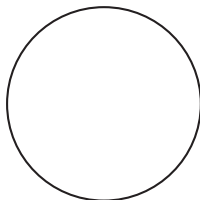


1 third

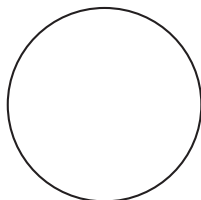


3 thirds

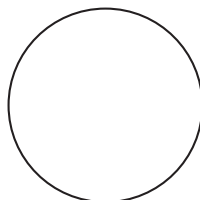
3. Partition each circle into fourths. Then, shade the shapes as indicated.



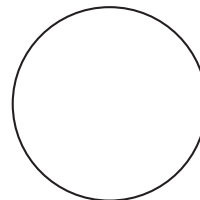
1 fourth



3 fourths



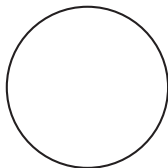
4 fourths



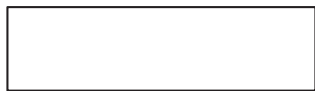
2 fourths

4. Partition and shade the following shapes. Each rectangle or circle is one whole.

a. 1 half



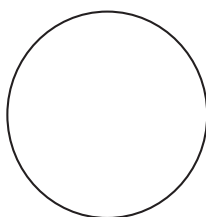
b. 1 fourth



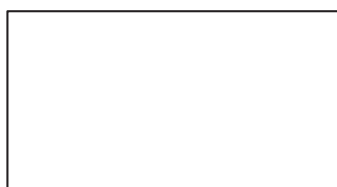
c. 1 third



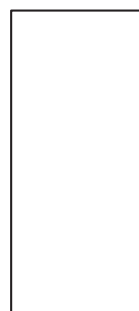
d. 2 fourths



e. 2 halves



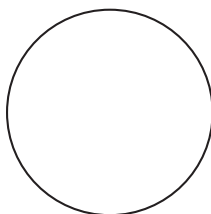
f. 2 thirds



g. 3 thirds



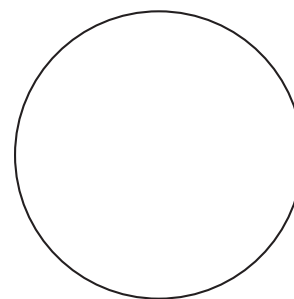
h. 3 fourths



i. 3 halves



5. Split the pizza below so that Shane, Raul, and John all have an equal share. Label each student's share with his name.



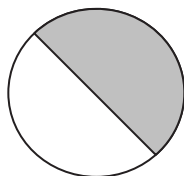
What fraction of the pizza did the boys get in all?

Name _____

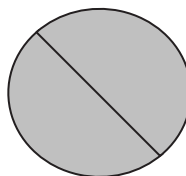
Date _____

1. For Parts (a), (c), and (e), identify the shaded area.

a.



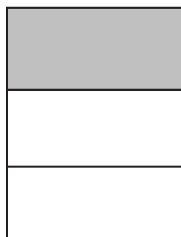
_____ half



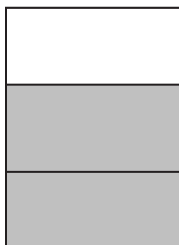
_____ halves

b. Circle the shape above that has a shaded area that shows 1 whole.

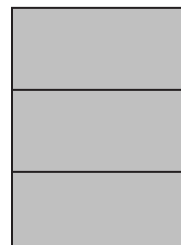
c.



_____ third



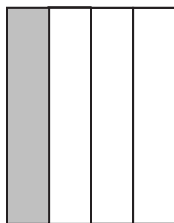
_____ thirds



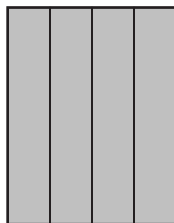
_____ thirds

d. Circle the shape above that has a shaded area that shows 1 whole.

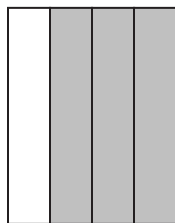
e.



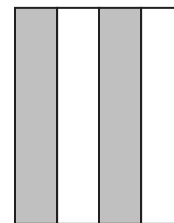
_____ fourth



_____ fourths



_____ fourths



_____ fourths

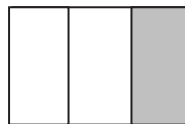
f. Circle the shape above that has a shaded area that shows 1 whole.

2. What fraction do you need to color so that 1 whole is shaded?

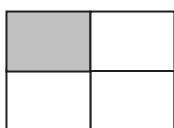
a.



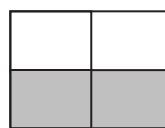
b.



c.



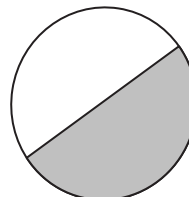
d.



e.



f.



3. Complete the drawing to show 1 whole.

a. This is 1 half.
Draw 1 whole.



b. This is 1 third.
Draw 1 whole.



c. This is 1 fourth.
Draw 1 whole.

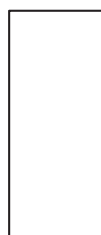


Name _____

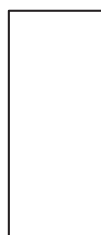
Date _____

1. Partition the rectangles in 2 different ways to show equal shares.

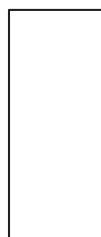
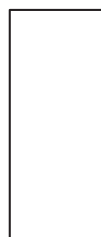
a. 2 halves



b. 3 thirds



c. 4 fourths



d. 2 halves



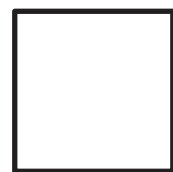
e. 3 thirds



f. 4 fourths



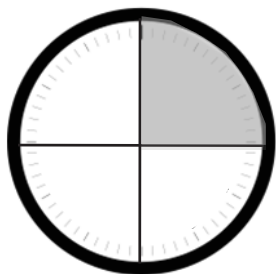
2. Cut out the square at the bottom of this page.
 - a. Cut the square in half to make 2 equal size rectangles. Shade 1 half using your pencil.
 - b. Rearrange the halves to create a new rectangle with no gaps or overlaps.
 - c. Cut each equal part in half to make 4 equal size squares.
 - d. Rearrange the new equal shares to create different polygons.
 - e. Draw one of your new polygons from Part (d) below. One half is shaded!

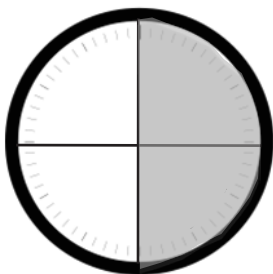


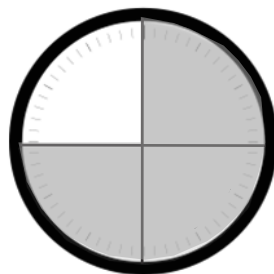
Name _____

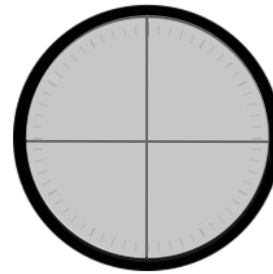
Date _____

1. Tell what fraction of each clock is shaded in the space below using the words *quarter*, *quarters*, *half*, or *halves*.









2. Write the time shown on each clock.

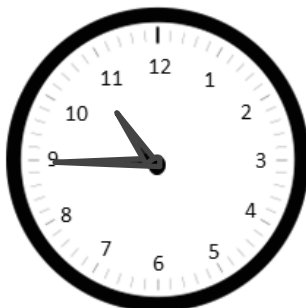
a.



b.



c.



d.



3. Match each time to the correct clock by drawing a line.

- Quarter to 5



- Half past 5



- 5:15

- Quarter after 5



- 4:45

4. Draw the minute hand on the clock to show the correct time.



3:30



11:45



6:15

Name _____

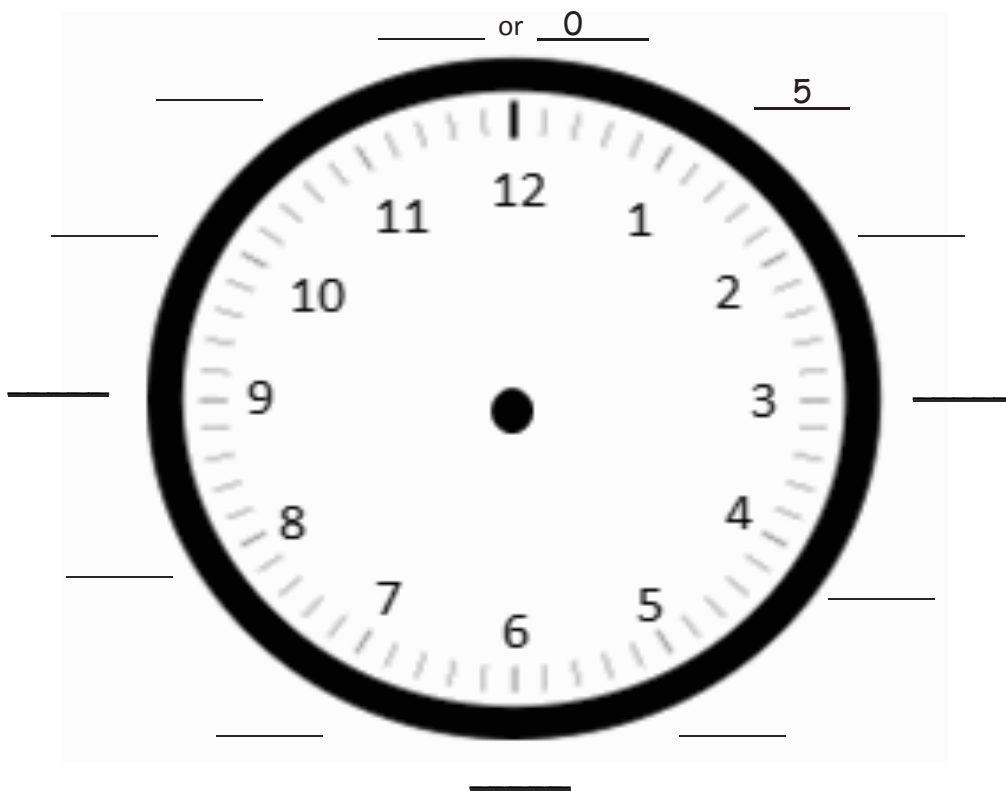
Date _____

1. Fill in the missing numbers.

0, 5, 10, _____, _____, _____, _____, 35, _____, _____, _____, _____

_____, _____, _____, 45, 40, _____, _____, _____, 20, 15, _____, _____

2. Fill in the missing minutes on the face of the clock.



3. Draw the minute hands on the clocks to match the correct time.



3:25



7:15



9:55

4. Draw the hour hands on the clocks to match the correct time.



12:30

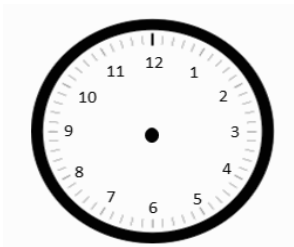


10:10

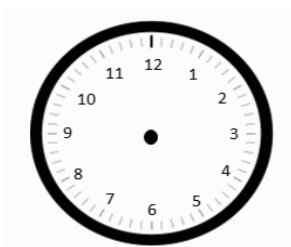


3:45

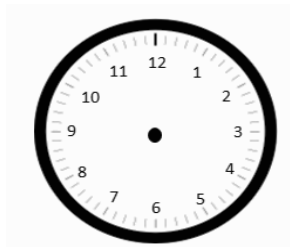
5. Draw the hour and minute hands on the clocks to match the correct time.



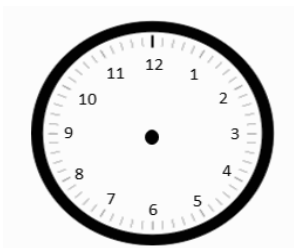
6:55



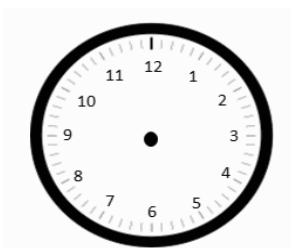
1:50



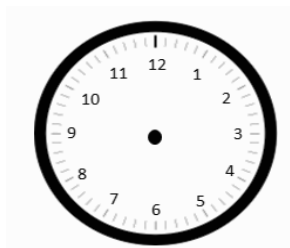
8:25



4:40

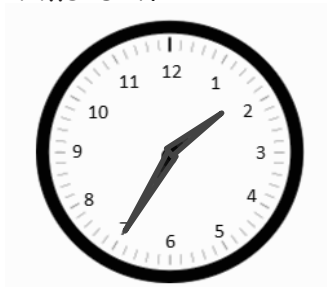


7:45



2:05

6. What time is it?







Name _____

Date _____

1. Decide whether the activity below would happen in the a.m. or the p.m. Circle your answer.

| | | | |
|---------------------------------|-------------|-----------------------------|-------------|
| a. Eating breakfast | a.m. / p.m. | b. Doing homework | a.m. / p.m. |
| c. Setting the table for dinner | a.m. / p.m. | d. Waking up in the morning | a.m. / p.m. |
| e. After-school dance class | a.m. / p.m. | f. Eating lunch | a.m. / p.m. |
| g. Going to bed | a.m. / p.m. | h. Heating up dinner | a.m. / p.m. |

2. Write the time displayed on the clock. Then, choose whether the activity below would happen in the a.m. or the p.m.

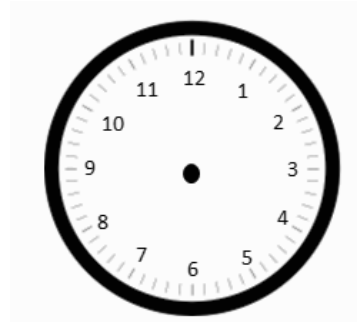
| | |
|--|---|
| <p>a. Brushing your teeth before school</p>  <p>_____ : _____ a.m. / p.m.</p> | <p>b. Eating dessert after dinner</p>  <p>_____ : _____ a.m. / p.m.</p> |
|--|---|

3. Draw the hands on the analog clock to match the time on the digital clock. Then, circle a.m. or p.m. based on the description given.

- a. Brushing your teeth before bedtime

8:15

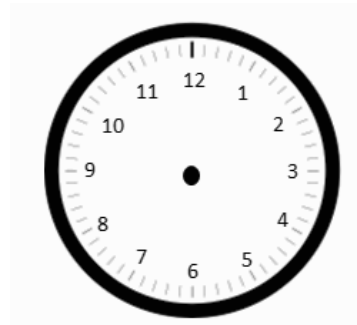
a.m. or p.m.



- b. Recess after lunch

12:30

a.m. or p.m.



4. Write what you might be doing if it were a.m. or p.m.

a. a.m. _____

b. p.m. _____



c. a.m. _____

d. p.m. _____



Name _____

Date _____

1. How much time has passed?

a. 2:00 p.m. → 8:00 p.m. _____

b. 7:30 a.m. → 12:00 p.m. (noon) _____

c. 10:00 a.m. → 4:30 p.m. _____

d. 1:30 p.m. → 8:30 p.m. _____

e. 9:30 a.m. → 2:00 p.m. _____

f.



p.m.



p.m.

g.



a.m.



a.m.

h.



a.m.



p.m.

2. Solve.

- a. Kylie started basketball practice at 2:30 p.m. and finished at 6:00 p.m. How long was Kylie at basketball practice?

- b. Jamal spent 4 and a half hours at his family picnic. It started at 1:30 p.m. What time did Jamal leave?

- c. Christopher took 2 hours doing his homework. He finished at 5:30 p.m. What time did he start his homework?

- d. Henry slept from 8 p.m. to 6:30 a.m. How many hours did Henry sleep?









Video tutorials: <http://bit.ly/eurekapusd>

Info for parents: <http://bit.ly/pusdmath>