BIG 10

Perimeter and Area

Ten ways to reinforce problem solving with Perimeter and Area and prep for testing!

Teaching in the Fast Lane

Table of Contents

To the Teacher

- This product is meant to be a no frills, all action tool for cementing the concept of perimeter and area in preparation for standardized testing.
- Each activity can be completed in a variety of ways to fit your classroom needs.
- It was created with the following standards in mind:
  - TEKS
    - 4.5D solve problems related to perimeter and area of rectangles where dimensions are whole numbers
  - Common Core
    - CCSS.Math.Content.4.MD.A.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems.

Prep Recommendations

- Each activity is created in black and white to conserve color ink
  - Using colored paper to differentiate different parts in each activity or the different stations will help students to stay organized.
- If you plan to use the activities for small group or partner activities over time, I would recommend laminating them for durability.

Content Vocabulary

represent

perimeter

area

model

equation

formula

length

width

dimension

Sort It!

Sort each problem solving situation as either solving for perimeter or area.

Teacher Suggestions

Sort It!

- In this activity students are asked to sort problem situations into either asking for perimeter or area.
- This activity can be used in a variety of ways
  - Small group with teacher guidance
  - A partner activity to practice
  - Independently to assess

Materials

Included:
- Problem cards
- Recording sheet
- Answer Key

Not Included:
- Pencil

1

Anna is framing a picture that is twelve inches tall and 16 inches wide. How many inches of frame will she need?

2

A dog yard is 37 feet long and 9 feet wide. How much sod should you buy to seed it?

3

The hull of a boat is 17 feet long and seven feet wide. How much space is within the hull?

4

The living room at the Royal Palace is 123 feet long and 82 feet wide. They are placing a chair rail around the entirety of the room. How much railing should they buy?

5

A construction project is 189 feet long and the same distance wide. They want to fence in the project to keep people out. How much fencing should they plan on?

6

A bumper helps to keep a baby safe from the crib's edges. If a crib is 42 inches long and 36 inches wide, how long should the total length of the bumper be?

7

The dining room at a new home is 14 feet long and 12 feet wide. How many 1 foot square tiles will they need to complete it?

8

A large window is 112 inches wide and 96 inches tall. How much fabric would you need to cover the window?

9

A patio is 12 feet wide and 14 feet long. How many feet of safety railing would you need to enclose the patio?

10

A tree provides a patch of shade that is about 9 feet wide and 6 feet tall. About how much space is shaded by the tree?

11

A dining room table is 72 inches long and 36 inches wide. I would like my tablecloth to hang over the edge 12 inches in each direction. How much fabric should I buy for my tablecloth?

12

I am fencing in my new yard that is 117 feet long and 99 feet wide. How many feet of fencing will I need?

13

A bulletin board is 14 feet long and seven feet tall. How much butcher paper would it take to cover it?

14

A bus seat is 16 inches wide and 14 inches long. How much space do you have to sit on a bus seat?

15

Mrs. Palmer wants to hang a flag banner around her classroom that is 22 feet long and 18 feet wide. How many feet of banner will she need?

16

Stacie is striping a soccer field for a tournament. The field is 90 meters long and 25 meters wide. How many meters will it take to stripe the out of bounds area only?

17

Alan is planning on lining a section of roof with Christmas lights. The section he has in mind is 19 feet long and 12 feet wide. How many feet of Christmas lights should he plan on?

18

Evan is adding a deck to his house. He plans for it to be a 16 foot long square. How much space will he be adding to his house?

Name _____ #_____ Date _____

Sort It! Response Sheet

Sort each of the problem situations as either asking for perimeter or area.

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18

Sort It! Answer Key

1 Perimeter	2 Area	3 Area	4 Perimeter	5 Perimeter	6 Perimeter
7 Area	8 Area	9 Perimeter	10 Area	11 Area	12 Perimeter
13 Area	14 Area	15 Perimeter	16 Perimeter	17 Perimeter	18 Area

Solve it!

Solve each of the word problems for perimeter or area.

Teacher Suggestions

Solve It!

- In this activity students are asked to solve for perimeter or area when given a problem situation
- This activity can be used in a variety of ways
  - Small group with teacher guidance
  - A partner activity to practice
  - Independently to assess

Materials

Included:
- Problem cards
- Recording sheet
- Answer Key

Not Included:
- Pencil

Scan it!

Start by with the "Start" card, scan each QR code and solve the problem to find the next code to scan until you reach the "The End" card and have <u>used all cards</u>.

Teacher Suggestions

Scan It!

- In this activity students are asked to scan QR Codes and complete the problems presented as they work their way through all the cards.
- This activity can be used in a variety of ways
  - Small group with teacher guidance
  - A partner activity to practice
  - Independently to assess
- Due to the nature of this activity, an answer key is not provided.

Materials

Included:
- QR Cards

Not Included:
- Pencil
- Answer key

Plan it!

Find the perimeter and area for each room in the floor plan.

Teacher Suggestions
Plan It!

- In this activity students are asked to find the perimeter and area of different rooms in a floor plan.
- This activity can be used in a variety of ways
  - Small group with teacher guidance
  - A partner activity to practice
  - Independently to assess

Materials

Included:
- Floor plan printable
- Answer Key

Not Included:
- Pencil

Model Memory

Play a game of memory by matching models to their correct perimeter and area.

Teacher Suggestions
Model Memory

- In this activity students are asked to play a game of memory by matching models to their correct perimeter and area.
- This activity can be used in a variety of ways
  - Small group with teacher guidance
  - A partner activity to practice
  - Independently to assess

Materials

Included:
- Model cards
- Perimeter and area cards
- Answer Key

Not Included:
- Pencil

Area War

A classic game of war, with the area of figures and descriptions given.

Teacher Suggestions
Area War

- In this activity students are asked to play a game of war using the area of figures and descriptions given.
- This activity can be used in a variety of ways
  - Small group with teacher guidance
  - A partner activity to practice independently to assess
- Due to the nature of this game, no answer key is provided.

Materials

Included:
- War cards
- Student direction

Not Included:
- Pencil
- Answer key

Explain It!

Use your math vocabulary to explain the difference in perimeter and area including how to solve for each.

Teacher Suggestions
Explain It

- In this activity students are asked to explain how to find the perimeter and area of a rectangle including the proper formula
- This activity can be used in a variety of ways
  - Small group with teacher guidance
  - A partner activity to practice
  - Independently to assess
- A rubric for the students' writing is included for this task

Materials

Included:
- Recording sheet
- Rubric for completed task

Not Included:
- Pencil

Dream Bedroom

Design the bedroom of your dreams and then find the area and perimeter of the items in it.

Teacher Suggestions
Dream Bedroom

- In this activity students are asked to use graph paper to create their dream bedroom and then find the perimeter and area of at least ten elements.
- This activity can be used in a variety of ways:
  - Small group with teacher guidance
  - As partner activity to practice
  - Independently to assess
- Due to the nature of this activity, an answer key is not provided.

Materials

Included:
- Graph paper
- Checklist of possible items for bedroom
- Example photo

Not Included:
- Pencil
- Answer key

What's in a Name?

Use the graph paper to create a poster of your name. Then find the area and perimeter of each letter

Teacher Suggestions
What's in a Name

- In this activity students are asked to create a poster of their names using block lettering, then find the area and perimeter of each letter.
- This activity can be used in a variety of ways
  - Small group with teacher guidance
  - A partner activity to practice
  - Independently to assess
- Due to the nature of this activity, an answer key is not provided.

Materials

Included:
- Graph paper
- Example photo

Not Included:
- Pencil
- Answer key

Analyze It!

Choose any two cards and find the difference in the area and perimeter for the two models.

Teacher Suggestions

Analyze It!

- In this activity students are asked to compare the area and perimeter of different models
- This activity can be used in a variety of ways
  - Small group with teacher guidance
  - A partner activity to practice
  - Independently to assess
- Due to the nature of this activity, an answer key is not provided.

Materials

Included:
- Model cards
- Recording sheet

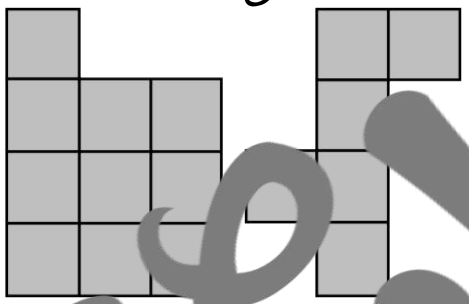
Not Included:
- Pencil
- Answer key

Name _____ #_____ Date _____

Test Bridge Questions

1. What is the difference in the area of the two figures?

a. 4
b. 5
c. 3
d. 6

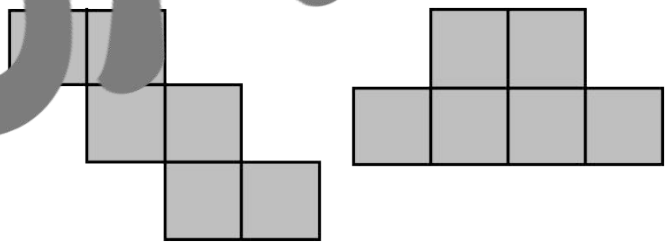


2. What formula would you use to find the area of a square?

a. $l \times w = p$
b. $2s =$
c. $4l \times w = a$
d. $2s = a$

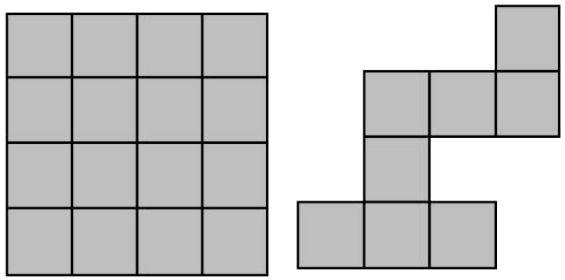
3. What is the difference in the perimeter of the two figures?

a. 12
b. 2
c. 4
d. 6



4. What is the combined area of the figures below?

a. 16
b. 24
c. 8
d. 12



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