BIG

AREA OF A RECTANGLE

TABLE OF CONTENTS

TO THE TEACHER

- This product is meant to be a no frills, all action tool for cementing the concept of area of rectangles 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
    - 3.6(C) determine the area of rectangles with whole number side lengths in problems using multiplication related to the number of rows times the number of unit squares in each row
  - Common Core
    - CCSS.MATH.CONTENT.3.MD.C.7.A Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.
    - CCSS.MATH.CONTENT.3.MD.C.7.B Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.

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

determine

area

whole number

multiplication

square unit

rectangular

square tiles

factor

use

rectangle

length

row

width

each

array

product

determine

use

area

rectangle

whole number

length

multiplication

row

square unit

width

rectangular

each

square tiles

array

factor

product

WORD PROBLEMS

Solve each word problem to find the area of the rectangle.

TEACHER SUGGESTIONS WORD PROBLEMS

- In this activity students are asked to solve word problems to find the area of a rectangle.
- This activity can be used in a variety of ways.
  - ✓ Small group with teacher guidance
  - ✓ Partner activity for practice
  - ✓ Independently to assess

Materials

Included:
- Word Problems
- Recording Sheet
- Answer Key

Not Included:
- Pencil

1

A rug measures 6 feet long and 4 feet wide. What is the area of the rug?

2

Greg is retiling his kitchen with 1 square foot tiles. If the kitchen is 12 feet long and 8 feet wide, how many tiles does he need?

3

A dog yard is 9 yards long and 7 yards wide. How much room does the dog have?

4

A bedroom is 10 feet wide and 8 feet long. How much carpet would it take to cover the floor of the bedroom?

5

A piece of printer paper is 8 inches wide and 11 inches wide. What is the area of the piece of printer paper?

6

A television screen is three feet wide and two feet tall. What is the surface area of the television screen?

7

A picnic blanket is a square with a length of seven feet. How much area does the blanket cover when stretched out?

8

A picture frame is 12 inches by 8 inches. How much of the wall will it cover up?

9

A bookshelf is 7 feet tall and 3 feet wide. What is the area of the bookshelf?

10

An Ipad case is 7 inches wide and 9 inches tall. What is the area of the cover of the Ipad case?

11

A mirror is 3 feet tall and 4 feet wide. How much of the wall will the mirror cover?

12

A pillow is a square with a length of 10 inches. What is the area of the pillow?

Name _____ #_____ Date_____

WORD PROBLEMS RESPONSE SHEET

Solve each word problem to find the area of the rectangle.

1	2	3	4
5	6	7	8
9	10	11	12

WORD PROBLEMS ANSWER KEY

1 24 square feet	**2** 96 tiles	**3** 63 square yards	**4** 80 square feet
5 88 square inches	**6** 6 square feet	**7** 9 square feet	**8** 96 square inches
9 21 square feet	**10** 63 square inches	**11** 12 square feet	**12** 100 square inches

AREA OF AN OVERLAY

Using the grid find the area of each rectangle.

TEACHER SUGGESTIONS AREA OF AN OVERLAY

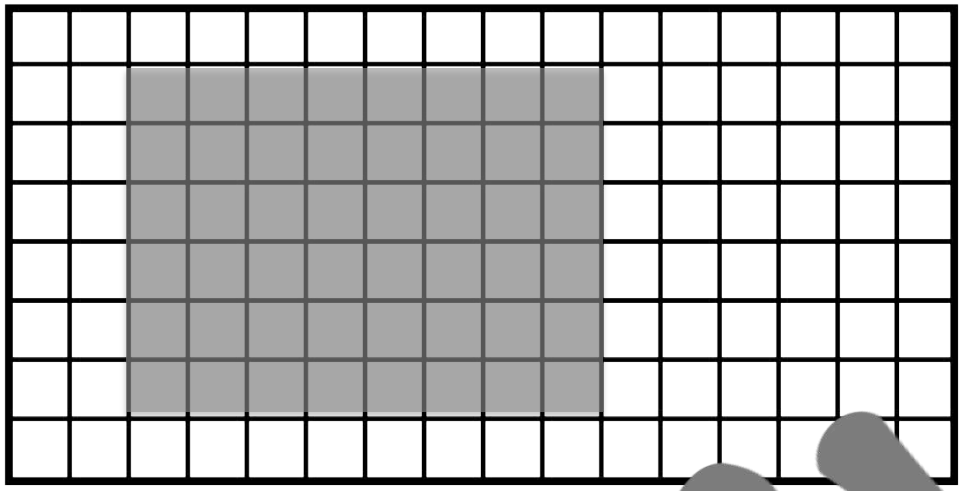
- In this activity students are asked to use a grid to find the area of each rectangle.
- This activity can be used in a variety of ways:
  - Small group with teacher guidance
  - ✓ A partner activity for practice
  - ✓ Independently to assess

Materials

Included:
- Rectangles on a Grid
- Recording Sheet
- Answer Key

Not Included:
- Pencil

1



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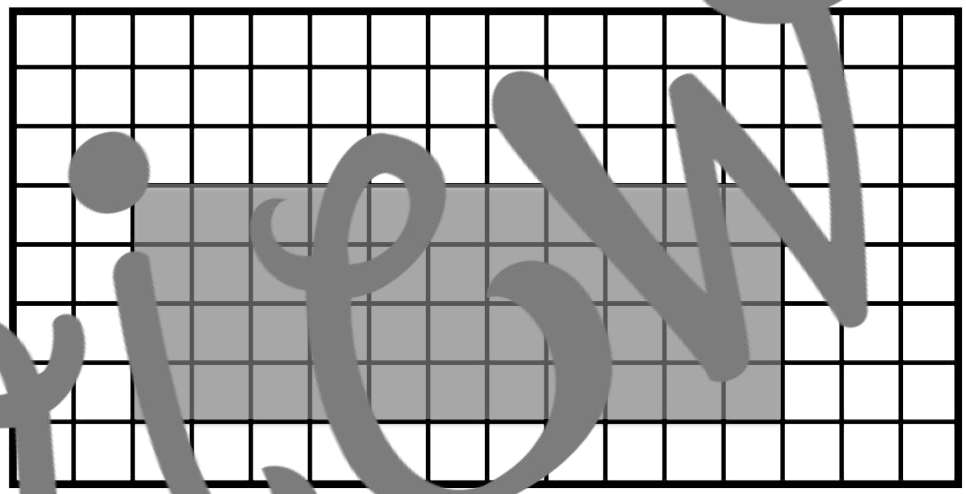

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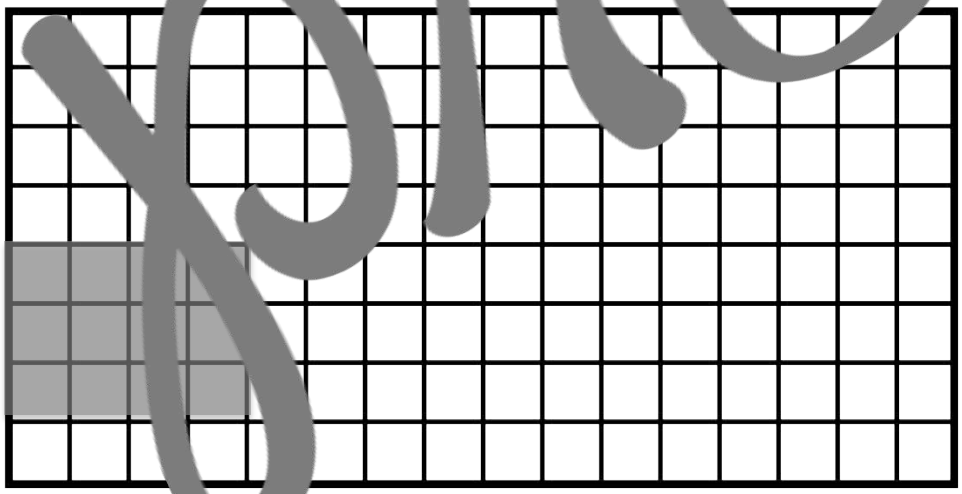

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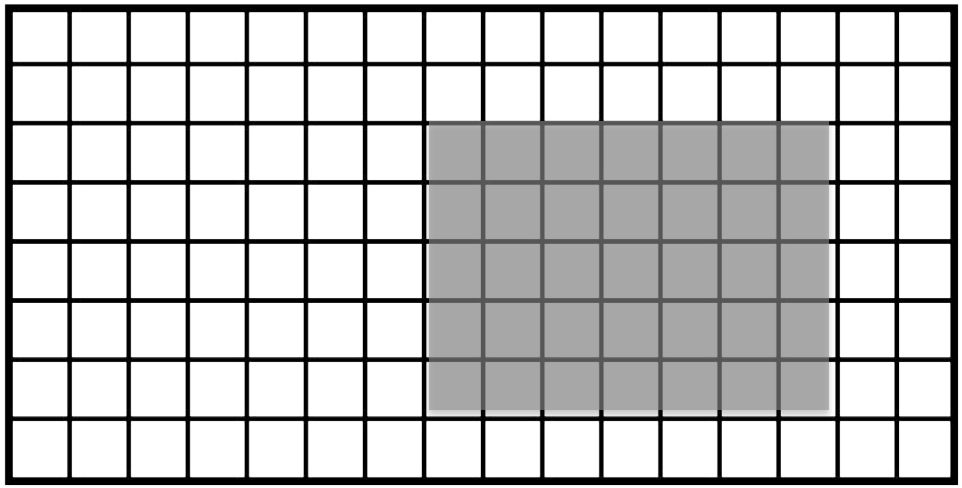

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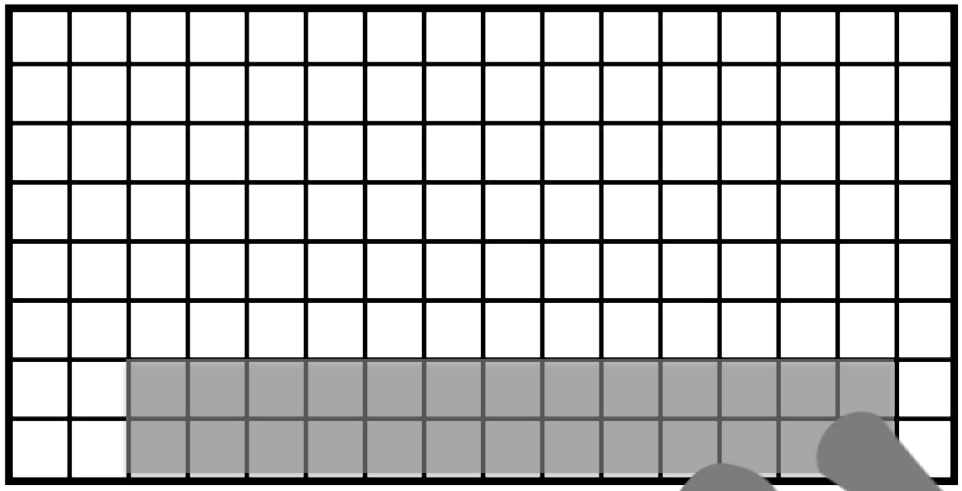

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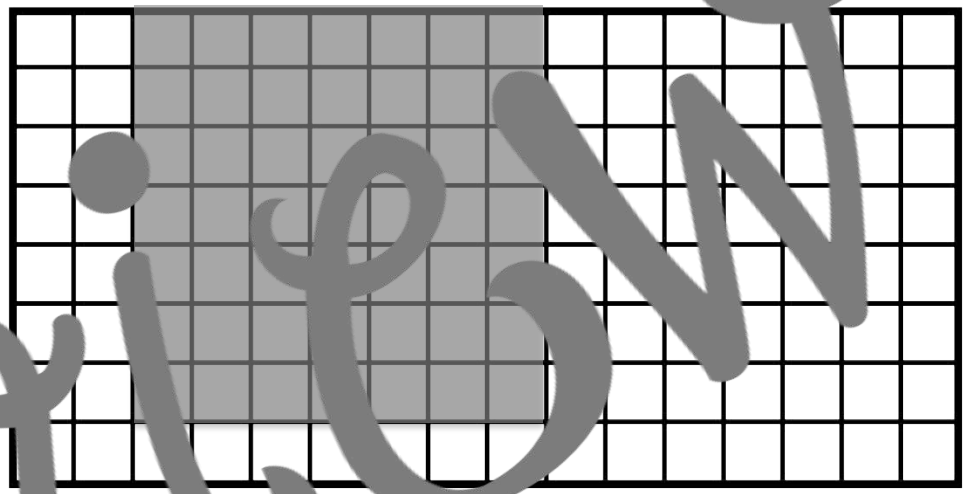

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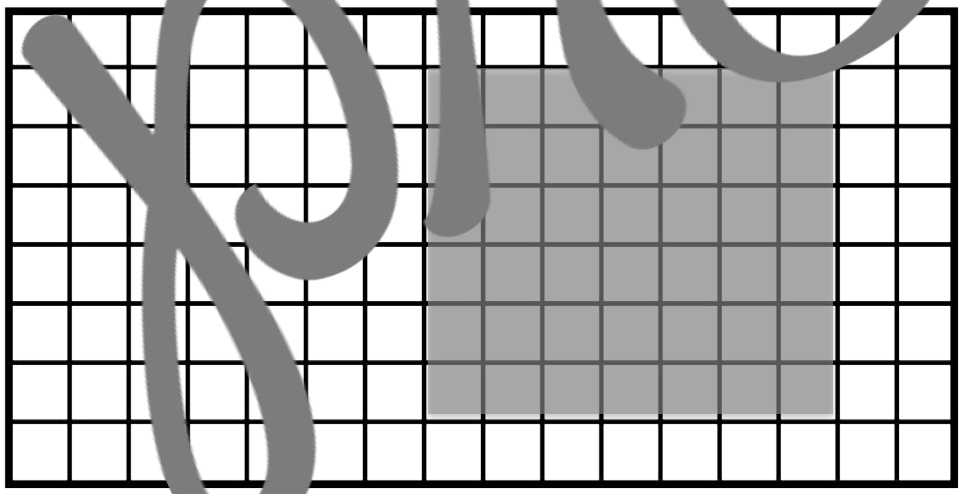

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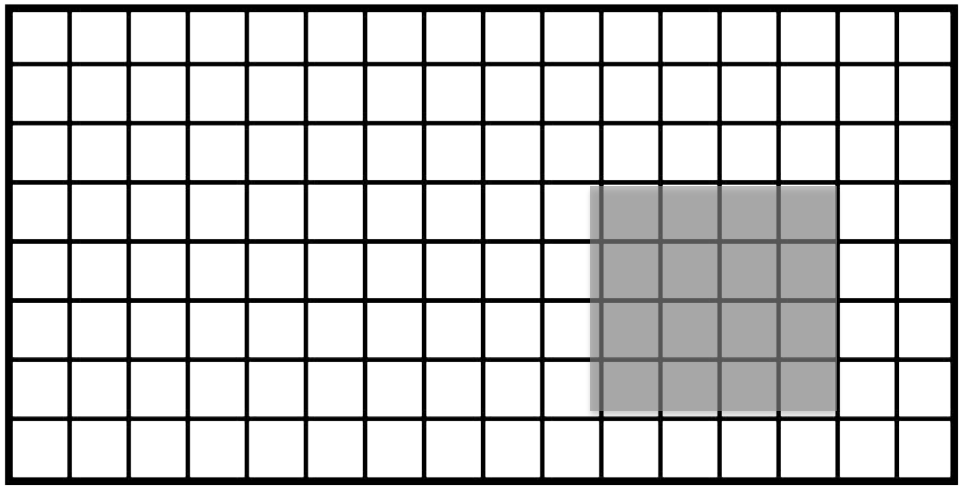

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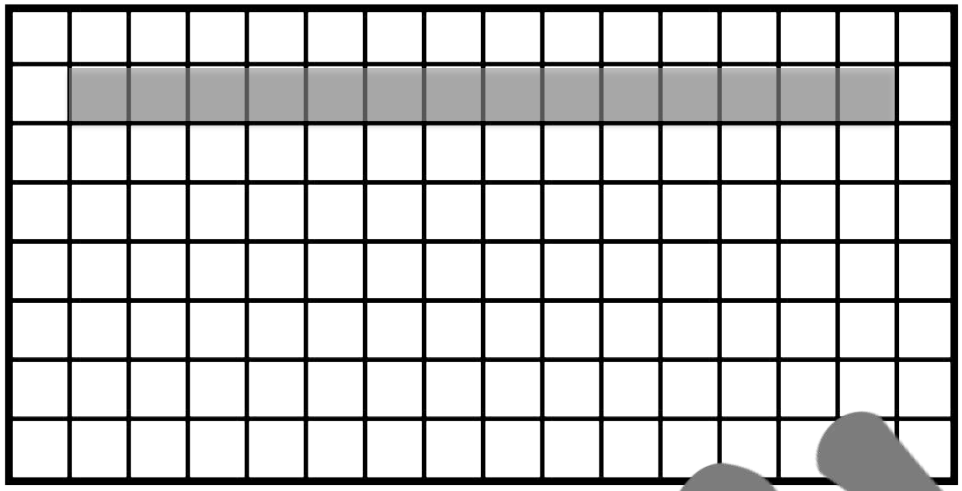

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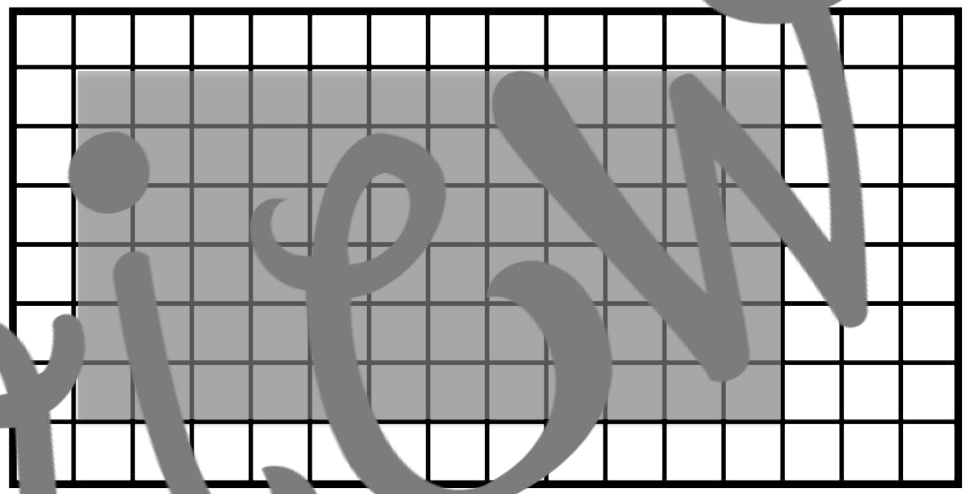

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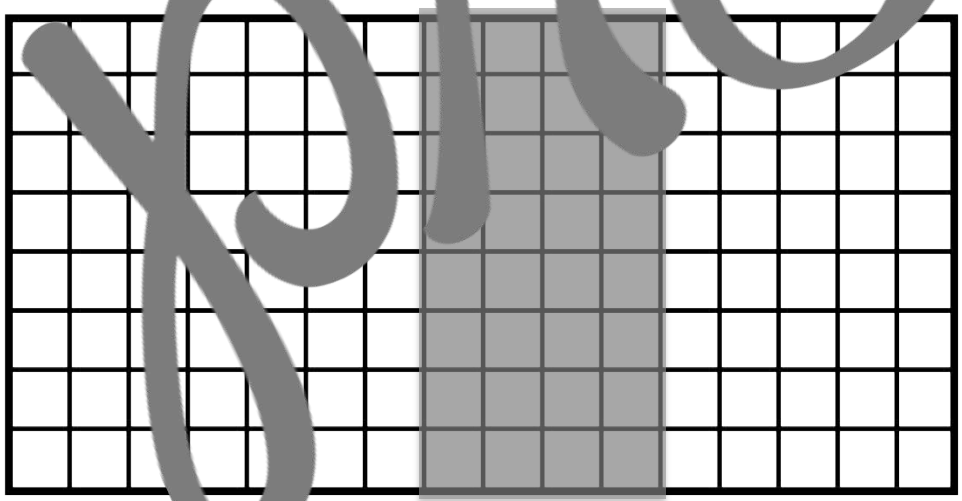

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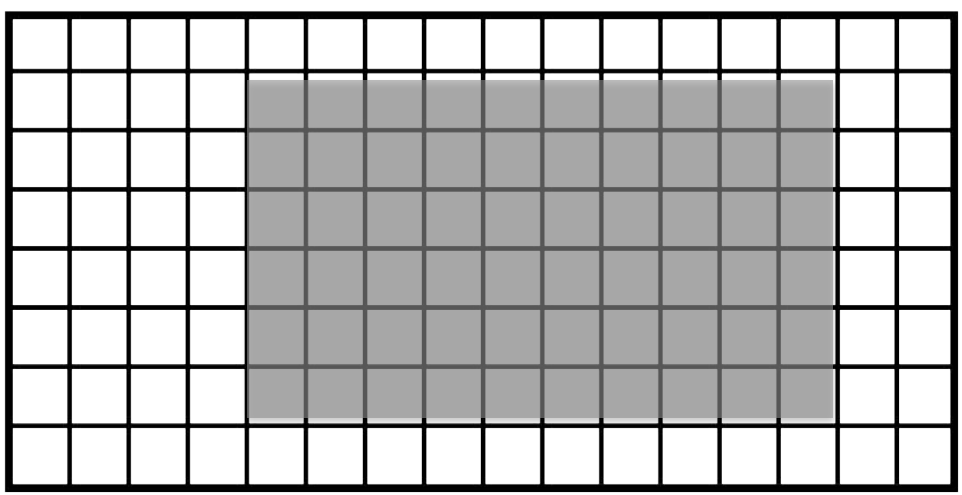


Name _____ #_____ Date_____

AREA OF AN OVERLAY RESPONSE SHEET

Using the grid find the area of each rectangle.

1	2	3	4
5	6	7	8
9	10	11	12

AREA OF AN OVERLAY ANSWER KEY

1 48 square units	**2** 44 square units	**3** 12 square units	**4** 33 square units
5 26 square units	**6** 49 square units	**7** 2 square units	**8** 16 square units
9 14 square units	**10** 72 square units	**11** 32 square units	**12** 60 square units

QR CODES

Scan the "START" card and follow the directions to use all cards stopping at the "END" card.

TEACHER SUGGESTIONS
QR CODES

- In this activity students are asked to scan QR codes and follow the directions to find the area of each rectangle.
- This activity can be used in a variety of ways:
  - ✓ Small group with teacher guidance
  - ✓ A partner activity for practice
  - ✓ Independently to assess

Materials

Included:
- QR Code Cards

Not Included:
- A device capable of scanning QR Codes such as a smartphone or tablet

START

36 SQUARE UNITS

24 SQUARE UNITS

72 SQUARE UNITS

50 SQUARE UNITS

32 SQUARE UNITS

21
SQUARE
UNITS

48
SQUARE
UNITS

55
SQUARE
UNITS

27
SQUARE
UNITS

42
SQUARE
UNITS

40
SQUARE
UNITS

END

EQUATION MODEL MATCH

Match each model to the equation you would use to find the area of the rectangle.

TEACHER SUGGESTIONS EQUATION MODEL MATCH

- In this activity students are asked to match each model to the equation they would use to find the area of the rectangle.
- This activity can be used in a variety of ways:
  - ✓ Small group with teacher guidance
  - ✓ A partner activity for practice
  - ✓ Independently to assess

Materials

Included:
- Model Cards
- Equation Cards
- Recording Sheet
- Answer Key

Not Included:
- Pencil

1

10

6

2

11

9

3

12

4

4

10

10

5

9

3

6

10

8

7

9

7

8

12

6

9

8

3

10

6

6

11

8

2

12

10

1

C 6×10=60	H 9×11=99
A 4×12=48	L 10×10=100
J 3×9=27	D 8×10=80
F 7×9=63	K 6×12=72
B 8×3=24	E 6×6=36
I 8×2=16	G 1×10=10

Name _____ #_____ Date_____

EQUATION MODEL MATCH RESPONSE SHEET

Match each model to the equation you would use to find the area of the rectangle.

1	2	3	4
5	6	7	8
9	10	11	12

EQUATION MODEL MATCH
ANSWER KEY

1C	2H	3A	4N
5J	6D	7F	8K
9B	10E	11I	12G

IMAGINE IT

Write a real world problem to go with each model and then solve.

TEACHER SUGGESTIONS
IMAGINE IT

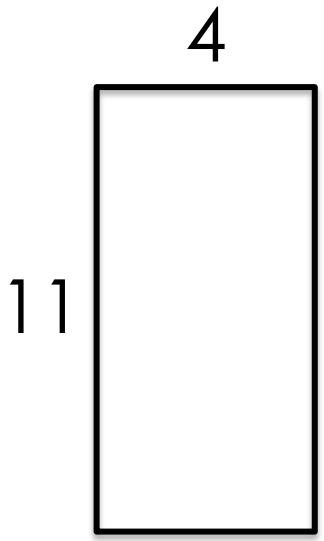
- In this activity students are asked to write their own real world problem to go with each model and then solve it.
- This activity can be used in a variety of ways:
  - ✓ Small group with teacher guidance
  - ✓ A partner activity for practice
  - ✓ Independently to assess

Materials

Included:
- Model Cards
- Recording Sheet

Not Included:
- Pencil
- Answer Key

1



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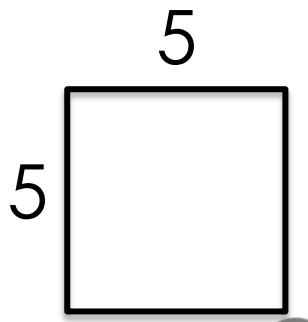

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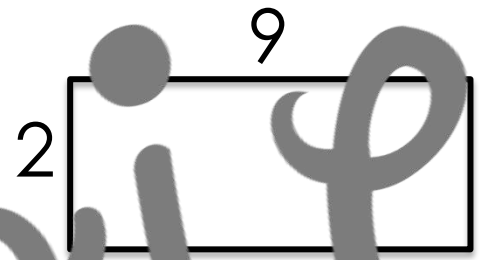

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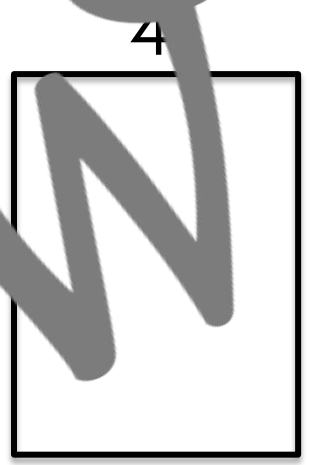

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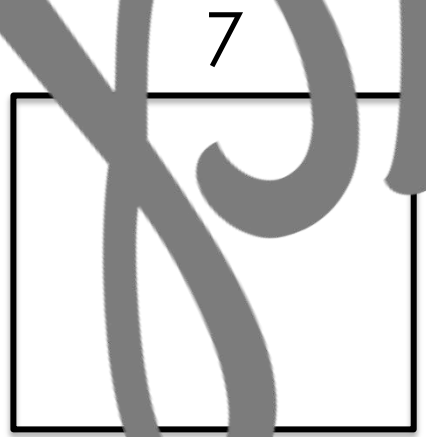

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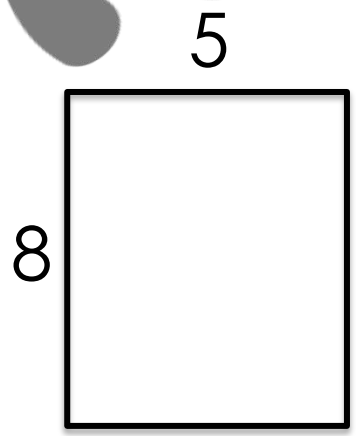

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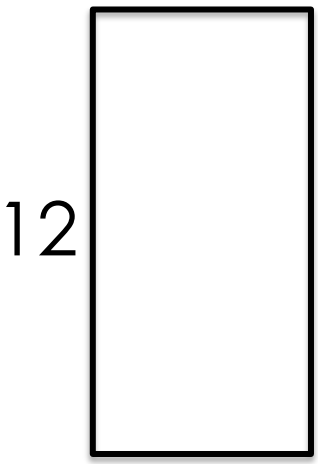

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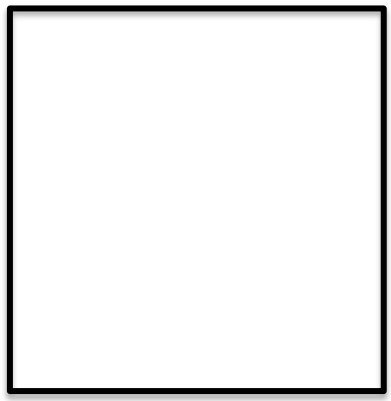

Name _____ #_____ Date_____

IMAGINE IT RESPONSE SHEET

Write a real world problem to go with each model and then solve.

1	2	3	4

more on back

5	6	7	8

PROBLEM MATCH

Match each equation to the area word problem that it solves.

TEACHER SUGGESTIONS PROBLEM MATCH

- In this activity students are asked to match each equation to the area word problem that it solves.
- This activity can be used in a variety of ways:
  - ✓ Small group with teacher guidance
  - ✓ As another activity for practice
  - ✓ Independently to assess

Materials

Included:
- Model Cards
- Problem Cards
- Recording Sheet
- Answer Key

Not Included:
- Pencil

1

A hole is dug in the ground 9 feet long and 6 feet wide. What is the area of the hole?

2

A room is 12 feet wide and 8 feet long. How much carpet would it take to cover the floor?

3

A garden is three yards long and four yards wide. What is the area of the garden?

4

A large screen television is five feet tall and seven feet wide. What is the area of the television screen?

5

A square topped stool top has a side length of nine inches. What is the area of the stool top?

6

A classroom is 10 yards long and 6 yards wide. What is the area of the classroom?

7

A desk calendar is twelve inches wide and nine inches tall. How much of the desk will the calendar cover?

8

A paperback book cover is 7 inches long and 4 inches wide. What is the area of the paperback book cover?

9

A highway billboard is 10 yards long and 4 yards tall. How big does the sign need to be to fill up the billboard?

10

A window is 4 feet tall and 2 feet wide. How much fabric is needed to make curtains to cover the window?

11

A bed is 6 feet long and 4 feet wide. How large of a blanket would you need to cover it?

12

A white board is three feet tall and eight feet long. What is the area of the white board?

C	6×9=54	**H**	12×8=96
K	3×4=12	**D**	5×7=35
J	9×9=81	**E**	6×10=60
B	12×9=108	**F**	7×4=28
I	10×4=40	**A**	4×2=8
L	6×5=30	**G**	8×3=24

Name _____ #_____ Date_____

PROBLEM MATCH RESPONSE SHEET

Match each equation to the area word problem that it solves.

1	2	3	4
5	6	7	8
9	10	11	12

PROBLEM MATCH ANSWER KEY

1C	2H	3K	4D
5J	6E	7B	8F
9I	10A	11L	12G

FIND THE LENGTH

Find the length of each rectangle when given the area and width.

TEACHER SUGGESTIONS FIND THE LENGTH

- In this activity students are asked to find the length of a rectangle when given the area and width.
- This activity can be used in a variety of ways
  - ✓ Small group with teacher guidance
  - ✓ As another activity for practice
  - ✓ Independently to assess

Materials

Included:
- Problem Cards
- Recording Sheet
- Answer Key

Not Included:
- Pencil

1

What is the length of a rug with an area of 64 square feet and a width of 8 feet?

2

What is the length of a window with an area of 54 square inches and a width of 7 inches?

3

What is the length of a blanket that has an area of 42 square feet and a width of 7 feet?

4

What is the length of a room that has an area of 120 square feet and a width of ten feet?

5

What is the length of a movie theater screen that has an area of 88 square yards and a width of 8 yards?

6

What is the length of a dictionary that has an area of 72 square centimeters and a width of 8 centimeters?

7

What is the length of a bulletin board that has an area of 56 square feet and a width of 8 feet?

8

What is the length of a wall that has an area of 48 square feet and a width of 6 feet?

9

What is the length of a park that has an area of 96 square miles with a width of 8 miles?

10

What is the length of a painting that has an area of 36 square inches and a width of four inches?

11

What is the length of a piece of fabric that has an area of 28 square inches and a width of 7 inches?

12

What is the length of a field that has an area of 63 square yards with a width of 7 yards?

Name _____ #_____ Date_____

FIND THE LENGTH RESPONSE SHEET

Find the length of each rectangle when given the area and width.

1	2	3	4
5	6	7	8
9	10	11	12

FIND THE LENGTH ANSWER KEY

1 8 feet	**2** 6 inches	**3** 6 feet	**4** 12 feet
5 11 yards	**6** 9 centimeters	**7** 7 feet	**8** 8 feet
9 12 miles	**10** 9 inches	**11** 4 inches	**12** 9 yards

AREA MEMORY

Play a classic game of memory by matching each rectangle to its area.

TEACHER SUGGESTIONS
AREA MEMORY

- In this activity students are asked to play a classic game of memory by matching each rectangle to its area.
- This activity can be used in variety of ways:
  - ✓ Small group with teacher guidance
  - ✓ A partner activity for practice
  - ✓ Independently to assess
- Cut the rectangle cards and area cards on two different colors of paper to make the game move along.

Materials

Included:
- Area Cards
- Rectangle Cards
- Answer Key

Not Included:
- Pencil

1

10

6

2

11

9

3

12

4

10

10

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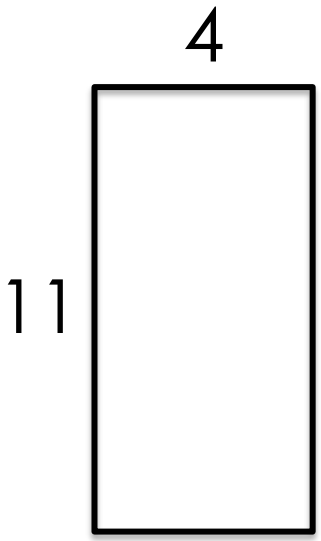

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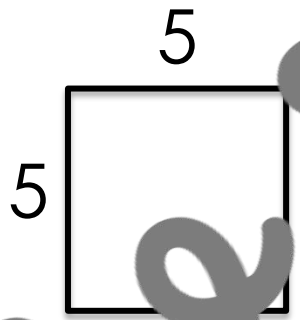

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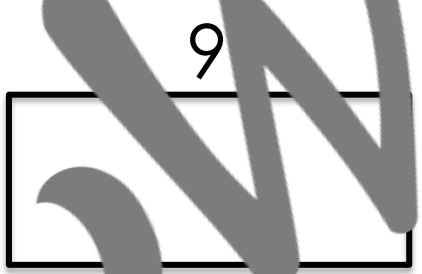

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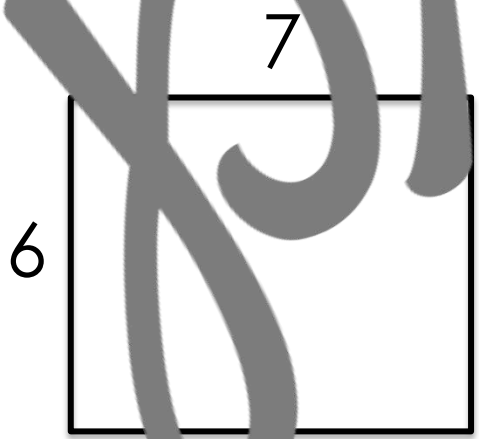

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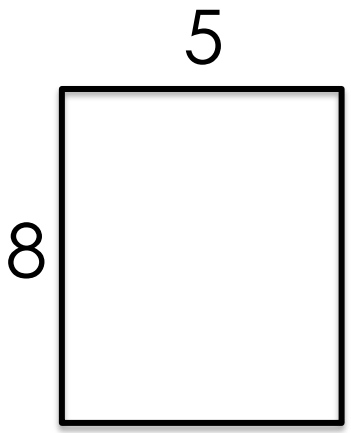

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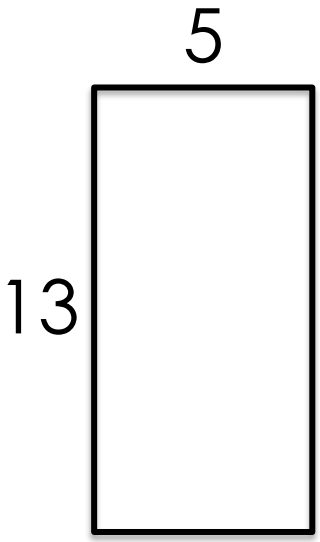


60 SQUARE UNITS

99 SQUARE UNITS

48 SQUARE UNITS

100 SQUARE UNITS

27 SQUARE UNITS

80 SQUARE UNITS

63 SQUARE UNITS

72 SQUARE UNITS

24 SQUARE UNITS

36 SQUARE UNITS

16 SQUARE UNITS

10 SQUARE UNITS

44 SQUARE UNITS

25 SQUARE UNITS

18 SQUARE UNITS

42 SQUARE UNITS

40 SQUARE UNITS

65 SQUARE UNITS

AREA MEMORY ANSWER KEY

1. 60 SQUARE UNITS	2. 99 SQUARE UNITS	3. 48 SQUARE UNITS	4. 100 SQUARE UNITS	5. 27 SQUARE UNITS	6. [illegible] SQUARE UNITS
7. 63 SQUARE UNITS	8. 72 SQUARE UNITS	9. 24 SQUARE UNITS	10. 36 SQUARE UNITS	11. 16 SQUARE UNITS	12. 10 SQUARE UNITS
13. 44 SQUARE UNITS	14. 25 SQUARE UNITS	15. 18 SQUARE UNITS	16. 42 SQUARE UNITS	17. 40 SQUARE UNITS	18. 65 SQUARE UNITS

MULTI-STEP

Solve each multi-step word problem to find the area.

TEACHER SUGGESTIONS MULTI-STEP

- In this activity students are asked to solve multi-step word problem to find the area of each rectangle.
- This activity can be used in a variety of ways:
  - ✓ Small group with teacher guidance
  - ✓ As another activity for practice
  - ✓ Independently to assess

Materials

Included:
- Problem Cards
- Recording Sheet
- Answer Key

Not Included:
- Pencil

1

A room is 10 feet long and 9 feet wide. The area rug in the room is a square with six foot sides. How much of the floor is not covered by the area rug?

2

A square with 4 inch sides makes up half of a rectangle. What is the area of the whole rectangle?

3

A poster is 3 feet tall and 2 feet wide. How much room would four posters take up?

4

Rectangle A has a length of 6 and a width of 10. Rectangle B has a length of 8 and a width of 7. How much larger is Rectangle A than Rectangle B?

5

A rectangle has a length of 12 inches and a width of 8 inches. A smaller rectangle is half the size of the first rectangle. What is the area of the smaller rectangle?

6

A room has three windows of exactly the same size. Each window is 4 feet tall and 5 feet wide. What is the combined area of the windows?

7

My backyard is 11 yards long and 7 yards wide. 15 square yards of the backyard are shaded. How much of the backyard is not shaded?

8

A dining room table is 6 feet long and 3 feet wide. There is a table runner that is 6 feet long and 1 foot wide down the center of the table. How much of the table is uncovered?

9

A picture window is 8 feet tall and 10 feet long. 45 square feet of it have already been cleaned. How much of the window still needs to be cleaned?

10

A kitchen countertop is in two sections. The longer section is 8 feet long. The shorter section is 3 feet long. Both sections are 2 feet wide. What is the total area of the kitchen countertop?

11

A bulletin board is 9 feet long and 4 feet tall. 22 square feet of the bulletin board has already been covered with fabric. What is the area of the uncovered part of the bulletin board?

12

A picture frame is 10 inches tall and 8 inches wide. The picture going into the frame is 7 inches long and 5 inches wide. How much extra space will there be in the frame?

Name _____ #_____ Date_____

MULTI-STEP RESPONSE SHEET

Solve each multi-step word problem to find the area.

1	2	3	4
5	6	7	8
9	10	11	12

MULTI-STEP ANSWER KEY

1 56 square feet	**2** 32 square inches	**3** 24 square feet	**4** [illegible] square units
5 48 square inches	**6** 60 square feet	**7** 62 square yards	**8** 12 square feet
9 [illegible] square feet	**10** 39 square feet	**11** 12 square feet	**12** 45 square inches

ROLL & FIND

Roll two dice to find the dimensions of a rectangle, & then shade the rectangle & determine the area.

TEACHER SUGGESTIONS
ROLL & FIND

- In this activity students are asked to roll dice to find the dimensions of a rectangle then use grid paper to shade the rectangle and find the area.
- This activity can be used in a variety of ways:
  - ✓ Small group with teacher guidance
  - ✓ A partner activity for practice
  - ✓ Independently to assess

Materials

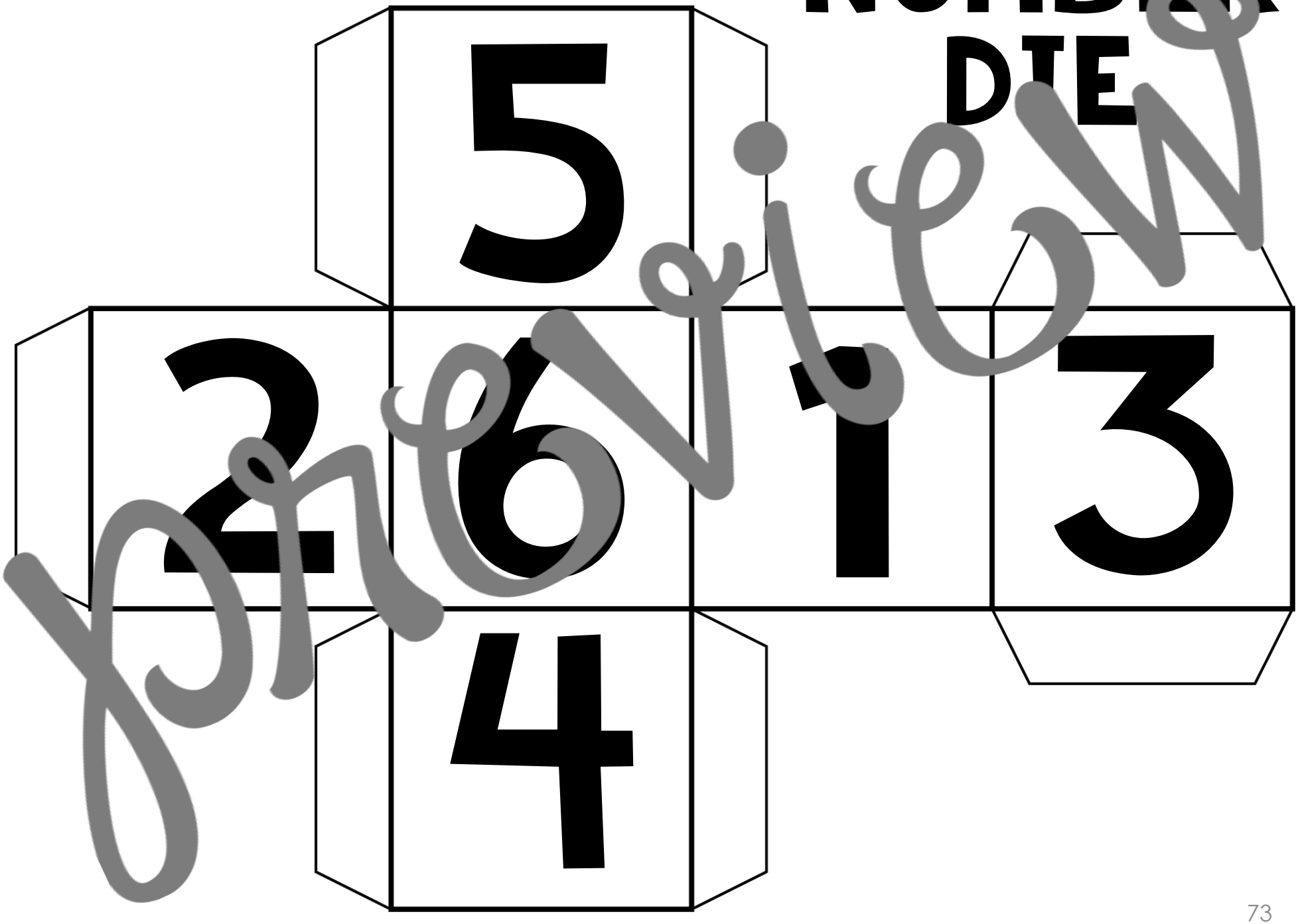
Included:

- Dice
  - I prefer to use dice in dice or multi-sided dice instead of paper dice, but either will work.
- Recording Sheet

Not Included:

- Pencil
- Answer Key

NUMBER DIE



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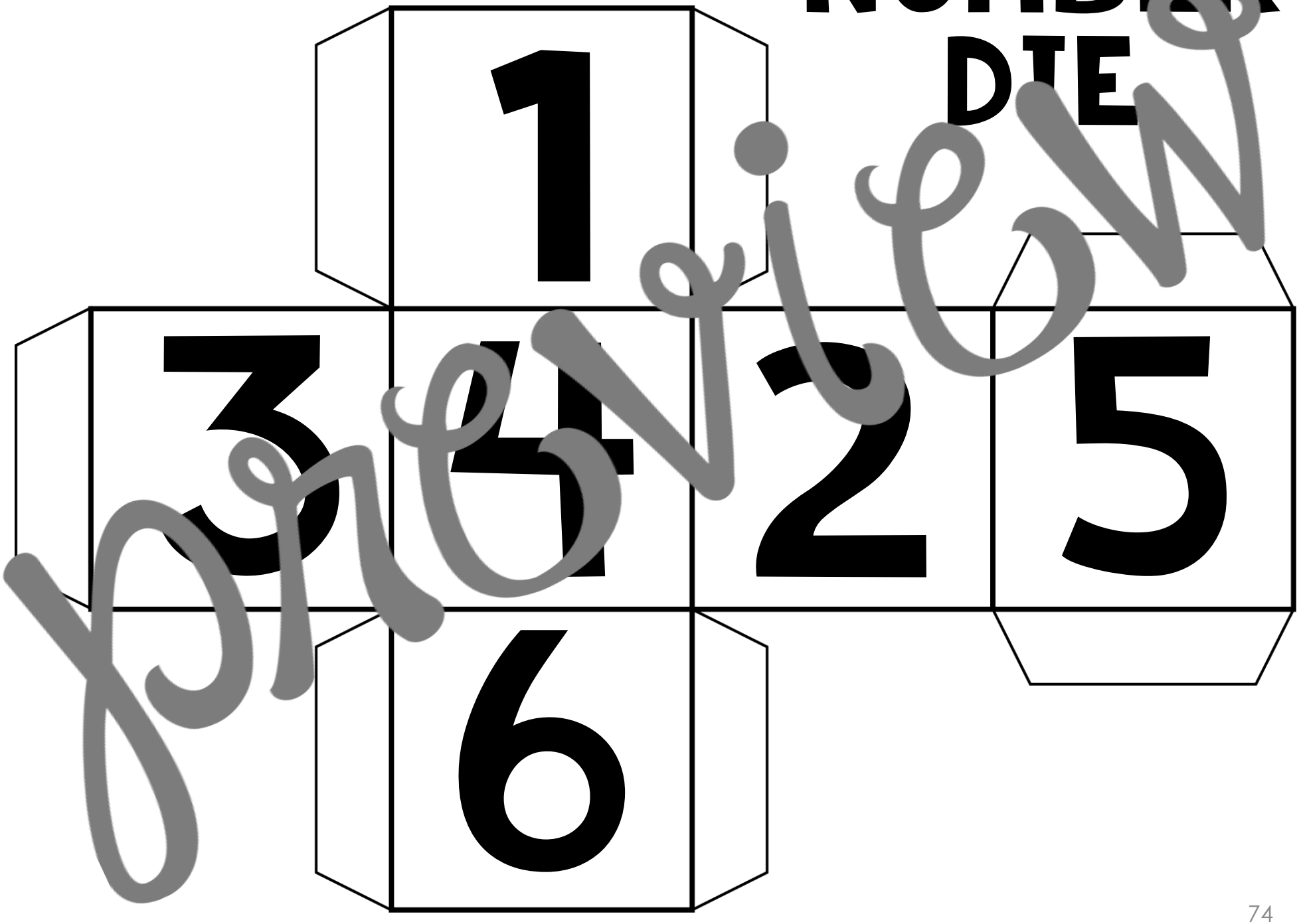
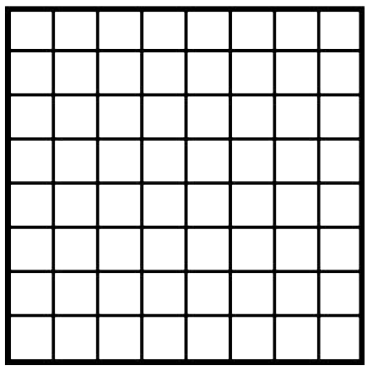
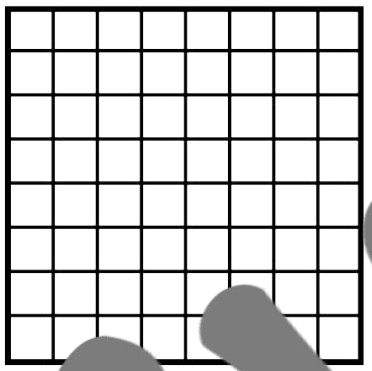


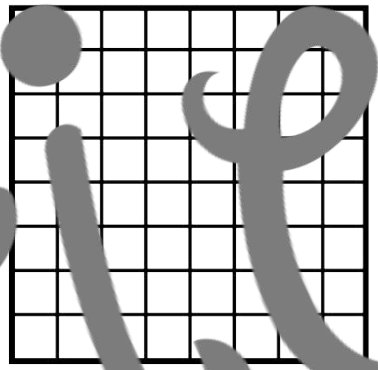
Name _____ #_____ Date_____

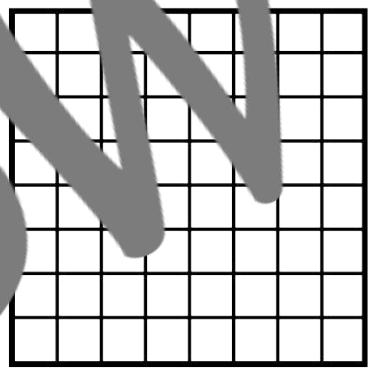
ROLL AND FIND RESPONSE SHEET

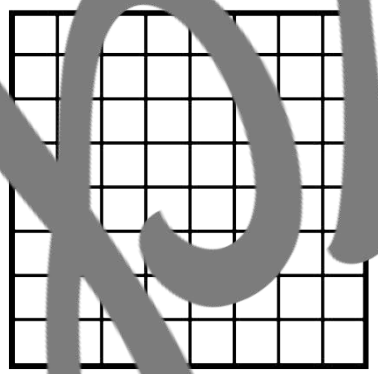
Roll the dice to find the dimensions of a rectangle. Shade the rectangle on the grid and determine the area.

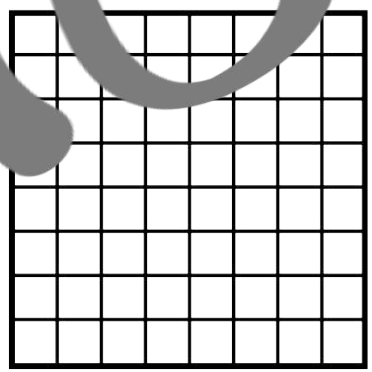
1 

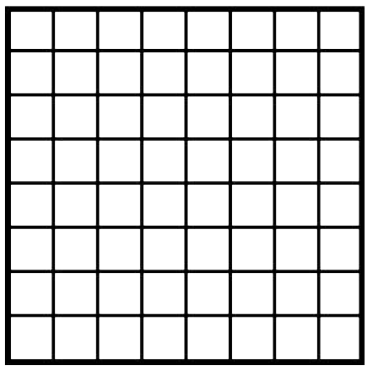
2 

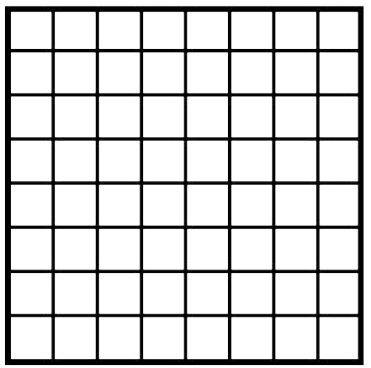
3 

4 

5 

6 

7 

8 

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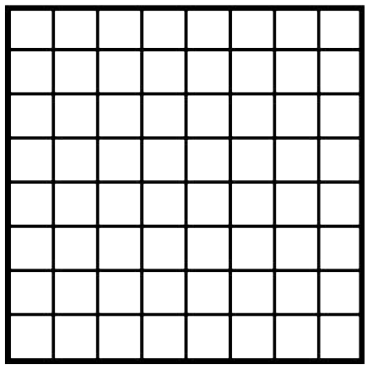
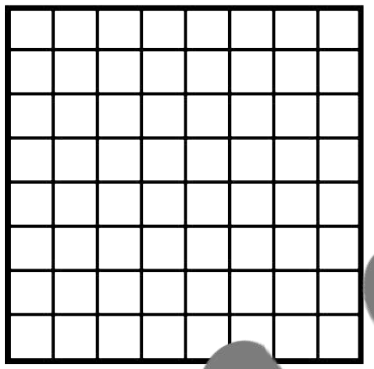
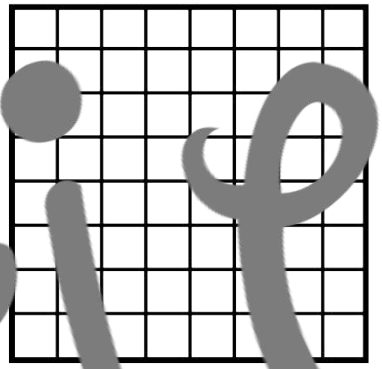
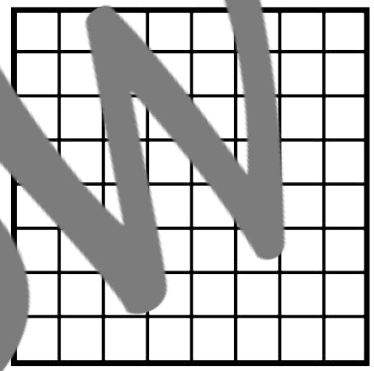
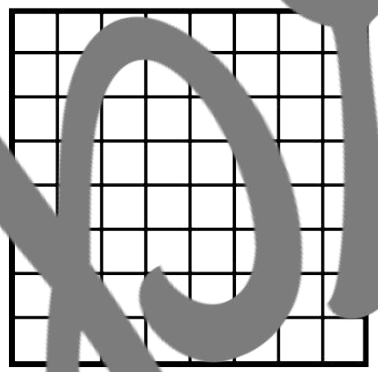
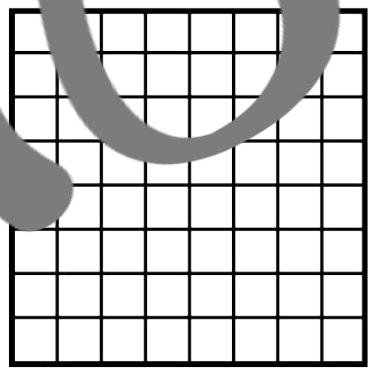
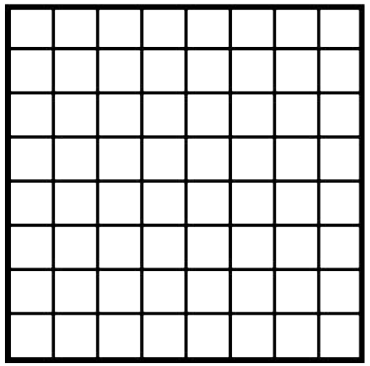
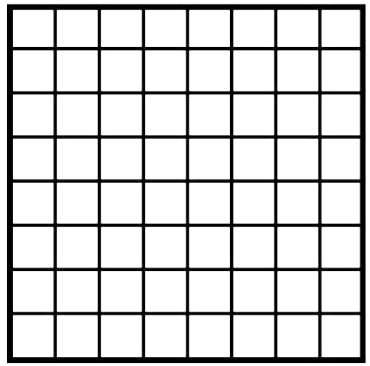
ROLL AND FIND RESPONSE SHEET

Roll the dice to find the dimensions of a rectangle. Shade the rectangle on the grid and determine the area.

9 	10 	11 	12 
13 	14 	15 	16 

Name _____ #_____ Date _____

TEST BRIDGE QUESTIONS

1. Jimmy marked off an area of the floor with an area of 20 square units. Which of the following is possible?

a. Four rows of six units
b. Four rows of four units
c. Four rows of five units
d. Five rows of six units

2. The top of a square box has a length of 7 inches. What is the area of the top of the box?

a. 49 square inches
b. 14 square inches
c. 42 square inches
d. 48 square inches

3. Meg cut a piece of fabric with an area of 24 square inches. Which of the following is not a possibility?

a. 2 inches by 12 inches
b. 8 inches by 3 inches
c. 4 inches by 6 inches
d. 5 inches by 4 inches

4. A garden is 6 yards wide and 8 yards long. What is the area of the garden?

a. 42 square yards
b. 48 square yards
c. 56 square yards
d. 14 square yards

TEST BRIDGE ANSWER KEY

1. Jimmy marked off an area of the floor with an area of 20 square units. Which of the following is possible?

a. Four rows of six units
b. Four rows of four units
c. Four rows of five units
d. Five rows of six units

2. The top of a square box has a length of 9 inches. What is the area of the top of the box?

a. 9 square inches
b. 18 square inches
c. 45 square inches
d. 48 square inches

3. Mary cut a piece of fabric with an area of 20 square inches. Which of the following is not a possibility

a. 5 inches by 12 inches
b. 8 inches by 3 inches
c. 4 inches by 6 inches
d. 5 inches by 4 inches

4. A garden is 6 yards wide and 8 yards long. What is the area of the garden?

a. 42 square yards
b. 48 square yards
c. 56 square yards
d. 14 square yards

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