Same Perimeter, Different Area

K8 Math Sense by Angie Seltzer

DIGITAL MATCHING

15 PowerPoint & Google Slides

3M44

Description of Slides

Slides 1-3: On each slide, students sort 12 cards into three matching groups of four cards each. There are 36 unique card images in all.

Slides 4-9: Students view five cards and choose one card that matches a sixth card. The images are the same as on earlier slides.

Slides 10-15: Students view six cards and choose two cards that match each other. These are more challenging than Slides 4-9.

Slides are independent, so assign as many as you want.

HOW TO USE

- **Distance Learning.** The onscreen cards are an alternative to printable math cards. (See the related resource with the same title and goal code, 3M44.)

- **PowerPoint.** Students can sort and match various card images on the screen. See the file 3M44_Matching_15p.ppt. A second PPT file has the cards already matched. See the file 3M44_Matching_Ans_15p.ppt. A printable answer key for reference is also available in this PDF.

- **Google Slides.** Open your Google Drive, choose NEW and upload the PPT files. These are compatible with Slides files and can be assigned to students. Save your original PowerPoint files in case you need to restore them.

- **Recording Sheet.** When students finish the onscreen matching activity, you may want to assign a recording sheet. See the included sheet with an answer key.

- **Follow-Up Games.** The printable cards, available separately, can be used to play four fun, engaging games. These are great for a tutor, parent, or aide to play with one student or with a small group. Multiple variations provide review throughout the year.

About the Author & Illustrator

Angie Seltzer is a mathematics curriculum specialist who designs and develops time-saving products for teachers. She holds a master's degree in mathematics education from The Ohio State University.

Angie has more than 30 years of professional publishing experience as an editor, writer, and/or designer of math textbooks and supplements including assessments. She also has more than 10 years of math tutoring experience.

About Card Set 3M44

Mathematics Content

These cards provide practice in counting or adding to find the perimeter of a shape composed of square units.

• The "star" cards show perimeters as even numbers from 10 through 26. These are the same perimeters used in the card set "Understanding Perimeter." However, in this set, there are three shapes with each perimeter.

• The three other suits (squares, triangles, and circles) show shapes made from shaded squares to match the star cards. Each card has "P =" with a question mark in a box to remind students to match the perimeter rather than the shaded area.

The two recording sheets require students to record the perimeter and the area of each shape.

Meaning of Set Code 3M44

The code stands for Grade 4, Measurement, Cluster 4, Goal 4 in the Grade 3 goals checklist by Angie Seltzer.

Making Generalizations

As students use the cards, encourage them to look for and discuss patterns and generalizations.

• Two shapes with the same perimeter can have different areas.

• Removing a rectangle from the corner of a larger rectangle changes the area but not the perimeter.

• The perimeter of a rectangle made with whole squares is an even number, but the area can be either even or odd.
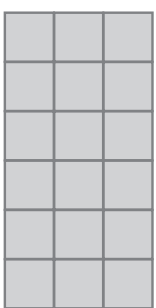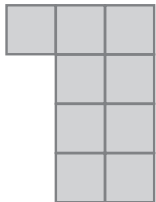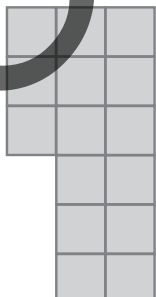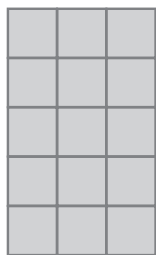
Stars
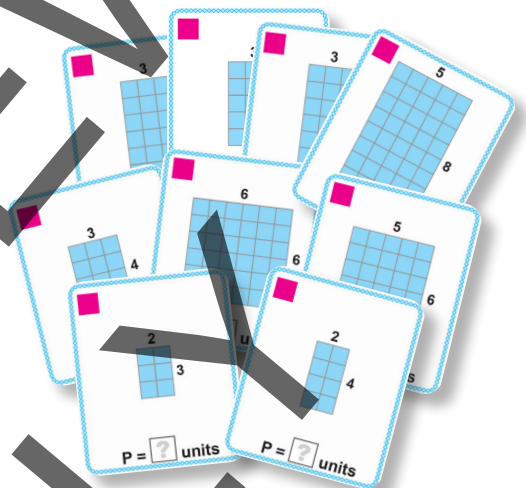
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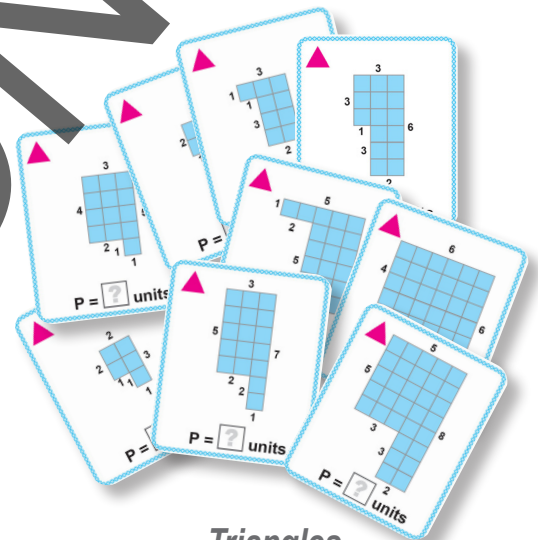
Triangles
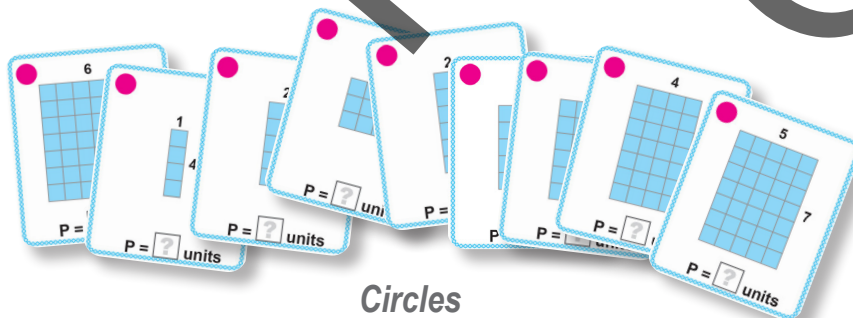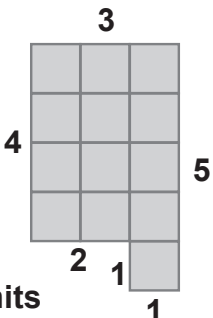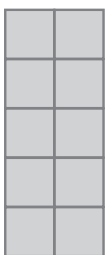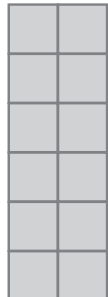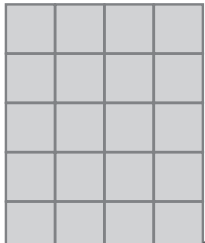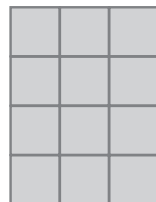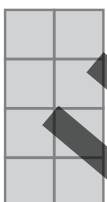
Circles

Same Perimeter, Different Area
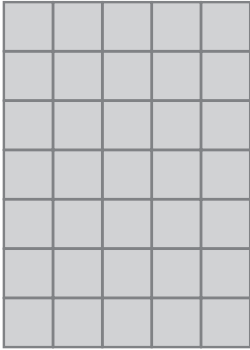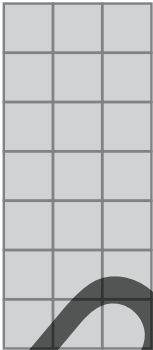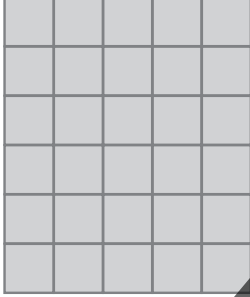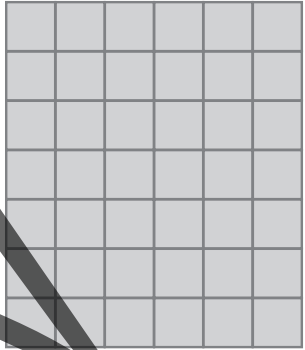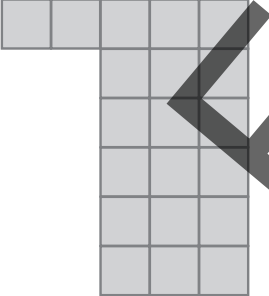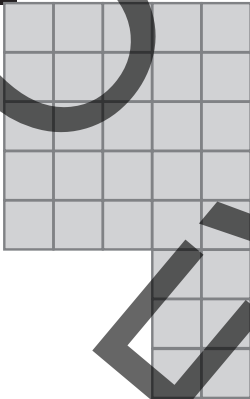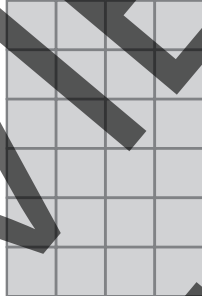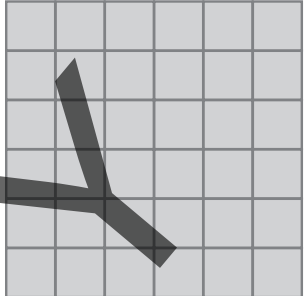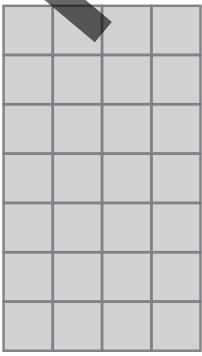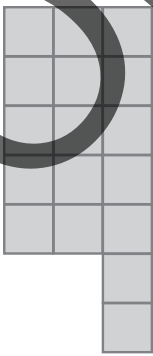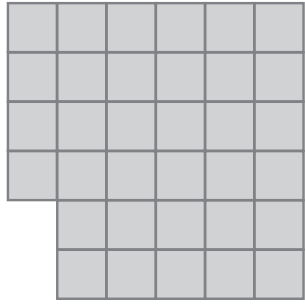
Name_____**Date**_____

Instructions: Label the side lengths of each shape. Then find the perimeter and area.

Sample:

3

4

5

2 1

1

P = **16** units

A = **13** sq. units

1

P = _____ units
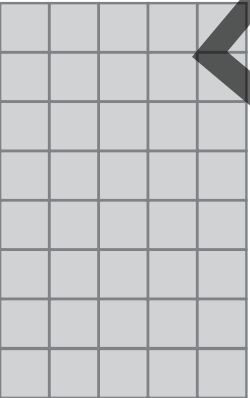
A = _____ sq. units

2

P = _____ units

A = _____ sq. units

3

P = _____ units

A = _____ sq. units

4

P = _____ units

A = _____ sq. units

5

P = _____ units

A = _____ sq. units

6

P = _____ units

A = _____ sq. units

7

P = _____ units

A = _____ sq. units

8

P = _____ units

A = _____ sq. units

9

P = _____ units

A = _____ sq. units

10

P = _____ units

A = _____ sq. units

11

P = _____ units

A = _____ sq. units

12

P = _____ units

A = _____ sq. units

13

P = _____ units

A = _____ sq. units

14

P = _____ units

A = _____ sq. units

Same Perimeter, Different Area

Name_____Date_____

Instructions: Label the side lengths of each shape. Then find the perimeter and area.
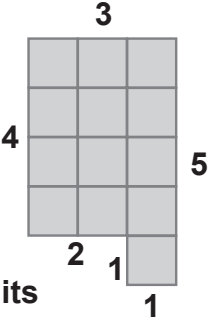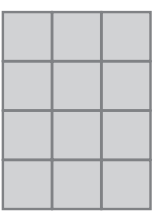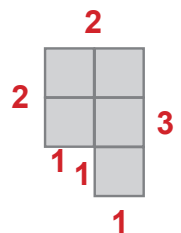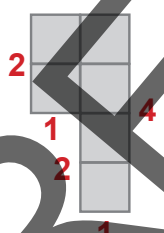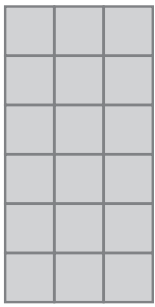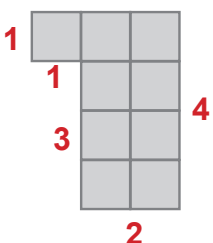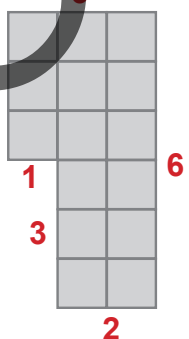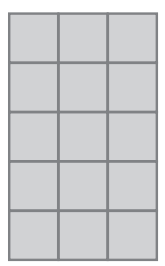
15

P = _____ units

A = _____ sq. units

16

P = _____ units

A = _____ sq. units

17

P = _____ units

A = _____ sq. units

18

P = _____ units

A = _____ sq. units

19

P = _____ units

A = _____ sq. units

20

P = _____ units

A = _____ sq. units

21

P = _____ units

A = _____ sq. units

22

P = _____ units

A = _____ sq. units

23

P = _____ units

A = _____ sq. units

24

P = _____ units

A = _____ sq. units

25

P = _____ units

A = _____ sq. units

26

P = _____ units

A = _____ sq. units

Same Perimeter, Different Area

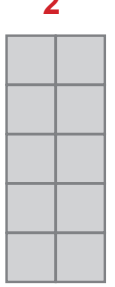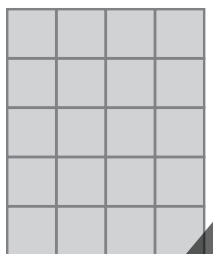**Instructions:** Label the side lengths of each shape. Then find the perimeter and area.

Sample: 3 4 5 2 1 1

P = **16** units
A = **13** sq. units

1 2 5
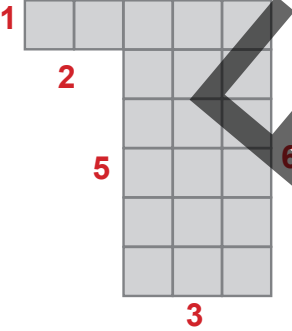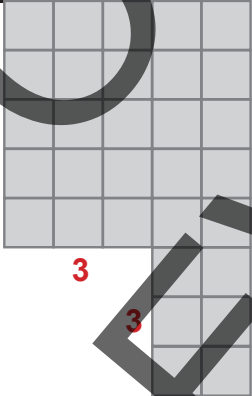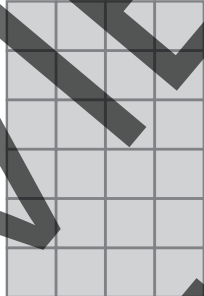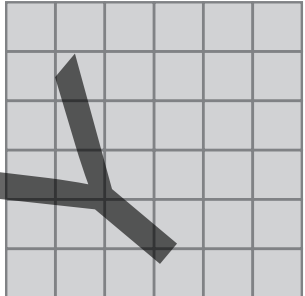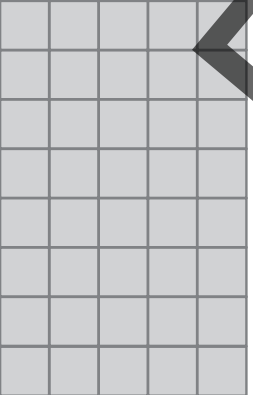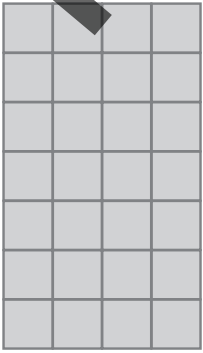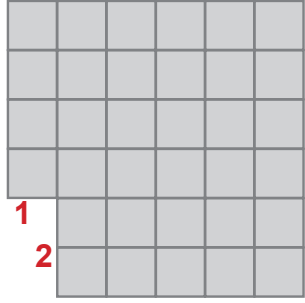
P = **14** units
A = **10** sq. units

2 2 6

P = **16** units
A = **12** sq. units

3 4 5

P = **18** units
A = **20** sq. units

4 3 3

P = **12** units
A = **9** sq. units

5 2 3

P = **10** units
A = **6** sq. units

6 3 4

P = **14** units
A = **12** sq. units

7 2 2 3 1 1 1

P = **10** units
A = **5** sq. units

8 2 2 1 2 4 1

P = **12** units
A = **6** sq. units

9 2 4

P = **12** units
A = **8** sq. units

10 1 4

P = **10** units
A = **4** sq. units

11 3 6

P = **18** units
A = **18** sq. units

12 3 1 1 3 4 2

P = **14** units
A = **9** sq. units

13 3 3 1 6 3 2

P = **18** units
A = **15** sq. units

14 3 5

P = **16** units
A = **15** sq. units

Same Perimeter, Different Area

Instructions: Label the side lengths of each shape. Then find the perimeter and area.

15
5
7

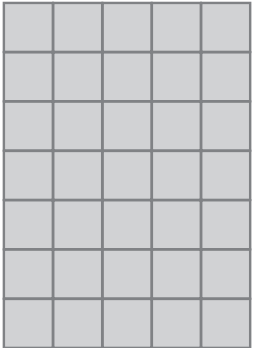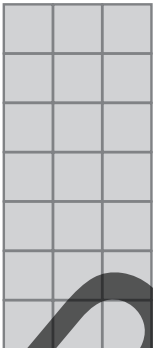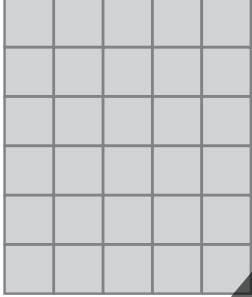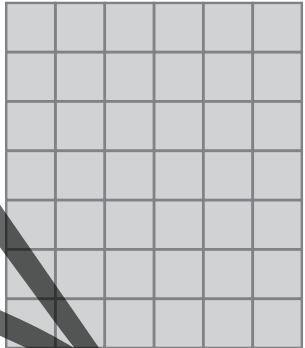P = __24__ units
A = __35__ sq. units

16
3
7

P = __20__ units
A = __21__ sq. units

17
5
6

P = __22__ units
A = __30__ sq. units

18
6
7

P = __26__ units
A = __42__ sq. units

19
5
1
2
5
6
3

P = __22__ units
A = __20__ sq. units

20
5
5
3
8
3
2

P = __26__ units
A = __31__ sq. units

21
4
6

P = __20__ units
A = __24__ sq. units

22
6
6

P = __24__ units
A = __36__ sq. units

23
5
8

P = __26__ units
A = __40__ sq. units

24
4
7

P = __22__ units
A = __28__ sq. units

25
3
5
7
2
2
1

P = __20__ units
A = __17__ sq. units

26
6
4
6
1
2
5

P = __24__ units
A = __34__ sq. units
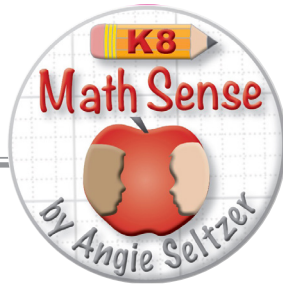
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