1. Which shape has the greatest area?

Shape 1	Shape 2	Shape 3	Shape 4
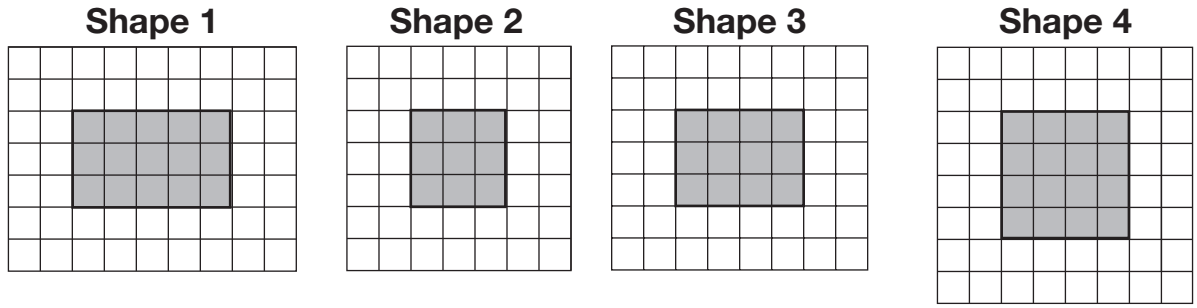
A Shape 1

B Shape 2

C Shape 3

D Shape 4

2. What is the area of this shape?
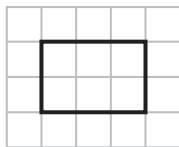
☐ = 1 square centimeter

A 5 square inches

B 5 square centimeters

C 6 square inches

D 6 square centimeters

3. Writing to Explain Diego is planning to make party invitations. He wants each invitation card to have an area of 24 square units. Should he use square centimeters or square inches as a unit? Use 1-inch grid paper and centimeter grid paper to draw shapes to help you decide. Explain your answer.
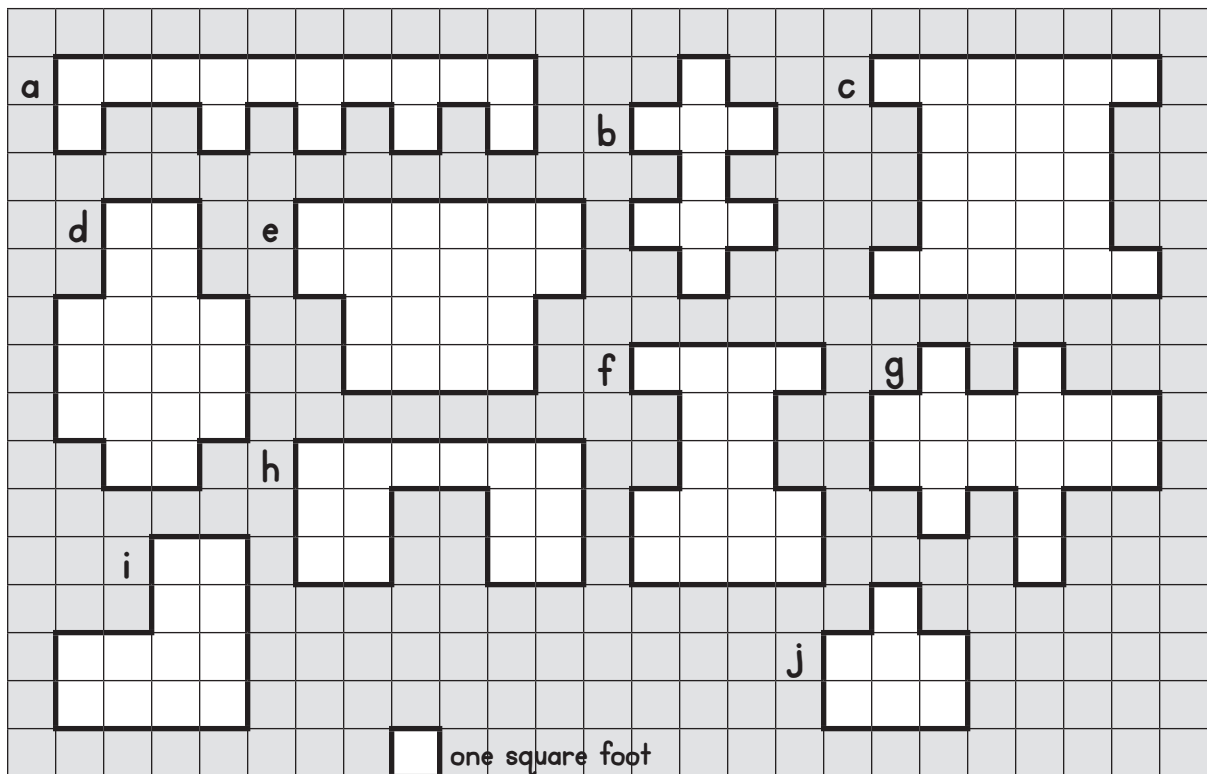
Teamwork

Get Started
👫 or 👪

Put 1 2 3 4 in a bag.
Get grid paper and a pencil.

Repeat for Each Round

Choose **a, b, c, d, e, f, g, h, i,** or **j**.
Pick a tile. Pick two tiles if your group has only two students.
Take turns finding the area of the polygon in square feet.
Use the method next to your tile number.

1 **Count the squares. Begin at the bottom of the figure.**

2 **Count the squares. Begin at the top of the figure.**

3 **Count the squares. Begin on the left side of the figure.**

4 **Count the squares. Begin on the right side of the figure.**

a   b   c   d   e   f   g   h   i   j

one square foot

If you have more time
Use grid paper. Choose one of the polygons on this page.
Draw a different polygon that has the same area.

Center Activity ★ 16-6B
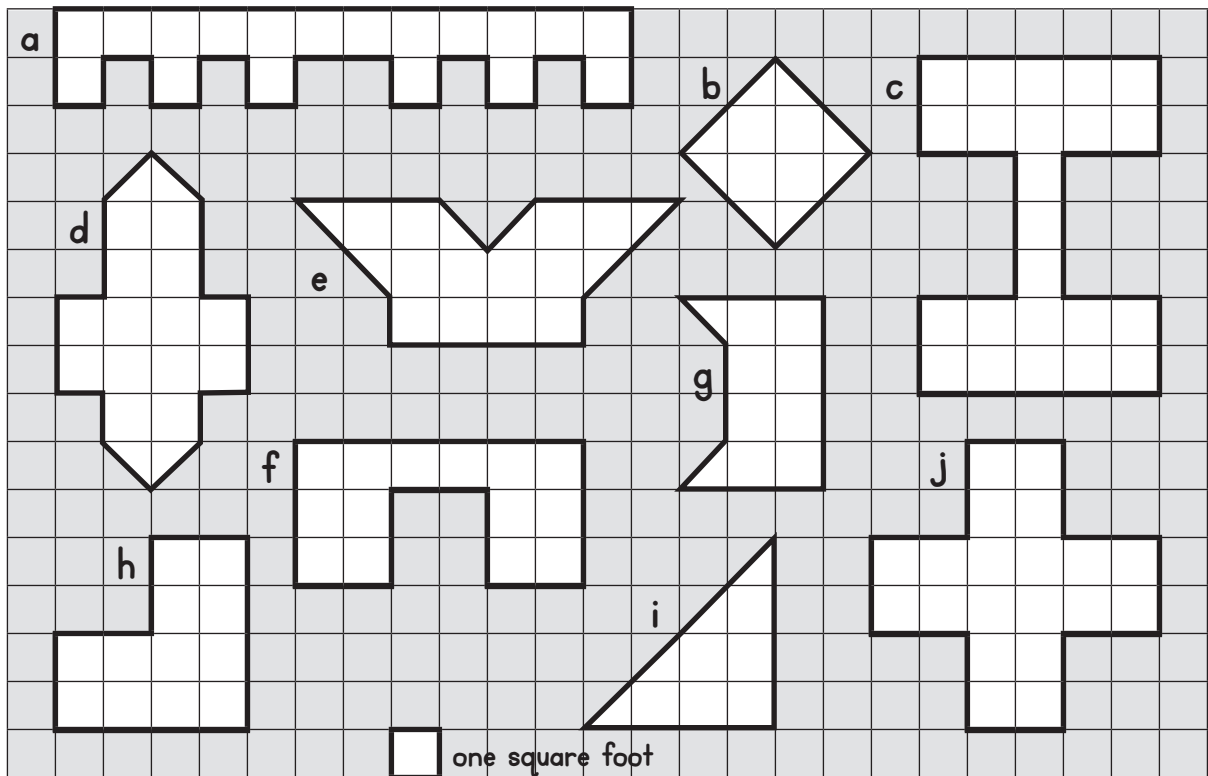
Teamwork

Get Started 👥

Put ⓪ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ in a bag.
Get grid paper and a pencil.

Repeat for Each Round

Pick a tile. Look at the bottom of the page. Find the area next to your tile number. Find a polygon with that area. Explain your choice. Place your tile on that polygon. Repeat until the bag of tiles is empty.

a
b
c
d
e
g
f
j
h
i

one square foot

⓪ **9 square feet**	① **15 square feet**	② **12 square feet**
③ **8 square feet**	④ **23 square feet**	
⑤ **18 square feet**	⑥ **14 square feet**	⑦ **8 square feet**
⑧ **20 square feet**	⑨ **16 square feet**	

If you have more time 🕐

Use grid paper. Choose one of the polygons on this page.
Draw a different polygon that has the same area.

   3

Area and Units

A square unit is a square with sides that are each 1 unit long.
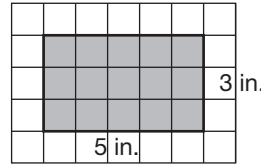
□ = 1 square unit

The number of square units needed to cover the region inside a figure is its area.

Pam wants to make flash cards for her study group. She wants each flash card to have an area of 15 square units. Should she use square centimeters or square inches as a unit?

3 cm

5 cm

□ = 1 square centimeter

3 in.

5 in.
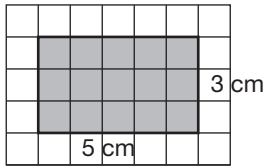
□ = 1 square inch

A square centimeter is a square that has a length of 1 cm on each side. If Pam uses square centimeters the area would be 15 square centimeters. That seems too small for a flash card.
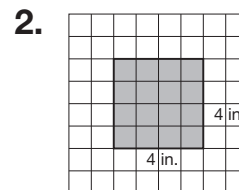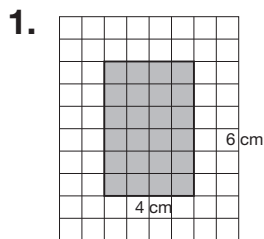
A square inch is a square that has a length of 1 inch on each side. If Pam uses square inches the area would be 15 square inches. That seems a reasonable size for a flash card.

Pam should use square inches as the unit.

What is the area of each figure shown below?

1.

6 cm

4 cm

_____

2.

4 in.

4 in.

_____

3. Is the area of a paperback book cover closer to 28 square inches or 28 square centimeters? Tell how you decided.

_____

_____

_____

4. Maria wants to draw a painting with an area of 40 square inches. If she drew her painting on 1-inch grid paper how many squares would the painting cover? Tell how you know.

_____

_____

Area and Units

1. Use a ruler to draw a figure with an area of 3 square centimeters.

2. Which of these figures has an area of 16 square inches?
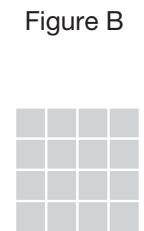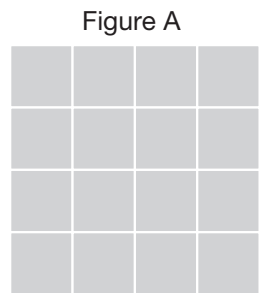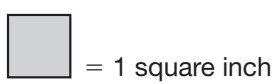
Figure A   Figure B

▢ = 1 square inch

Figure _____

3. **Draw a Picture** Maya made a sign with an area of 48 square centimeters. Use centimeter grid paper to draw a shape that shows what her sign could look like.

4. Suppose Maya made another sign with an area of 48 square inches. Would this sign be larger or smaller than the sign with an area of 48 square centimeters? Explain how you know.

_____

_____

_____

5. What is the area of this figure in square centimeters?
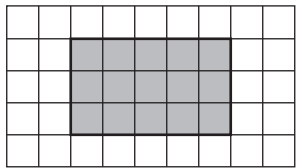
▢ = 1 square centimeter

A 12   **B** 14   **C** 15   **D** 17

Operation Math

Thunder and Lightning One lightning flash in the sky releases 4 bolts in less than 1 second. These lightning bolts superheat the air around them. The air particles move so quickly that they break the speed of sound. This causes the sound known as thunder.

1. Complete the picture of lightning bolts for 7 flashes. How many bolts are there? What operation is reasonable for the picture you drew?

FLASH   FLASH   FLASH   FLASH   FLASH   FLASH   FLASH

Operation _____

You can tell how far away lightning strikes by counting the number of seconds from the time you see the flash until the time you hear thunder. Lightning strikes 1 mile away for every 5 seconds counted.

2. Complete the picture of how many seconds pass if the lightning struck 4 miles away. What operation is reasonable for the picture you drew?

           Mile 1   Mile 2   Mile 3   Mile 4

Seconds

           Operation _____