MASSACHUSETTS / GRADE 3

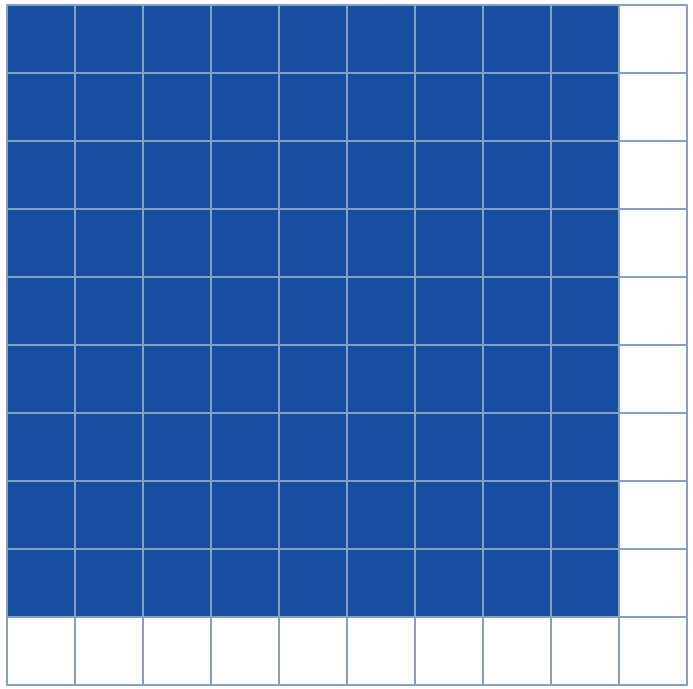
INSIDE THE GOLDEN DOME

An area investigation
through real places and objects

FIELD NOTES / FIVE STATIONS



ELECTION MORNING



100 equal square units

1. Blue: 9 rows of 9.
   What is the area?

2. The whole grid has 100 squares.
   What area is white?

The news says “81% reporting.”
What does that describe?

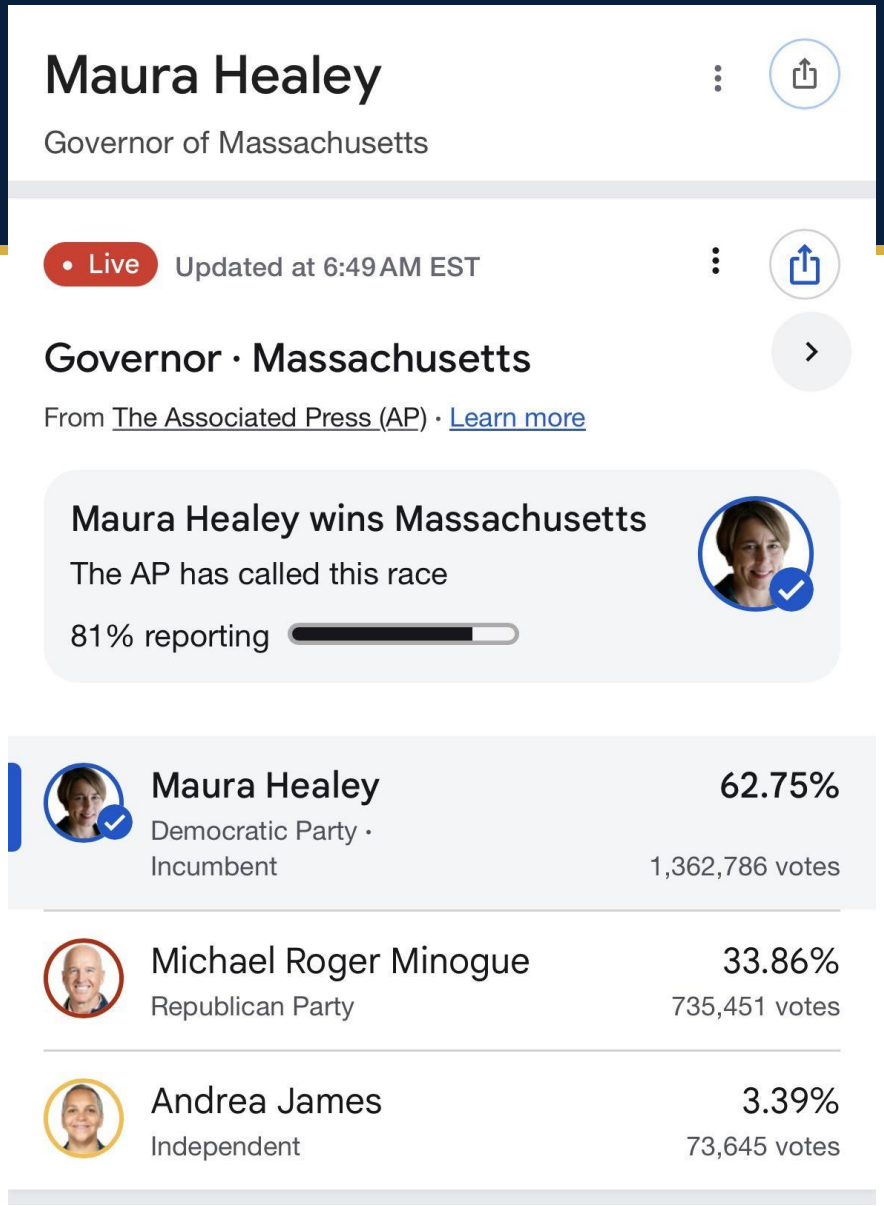
HEALEY WINS

81%

reporting at that moment

62.75%

Healey's vote share in this snapshot





THE PERSON BEHIND THE TITLE

MAURA HEALEY

The oldest of five children

Her mother was a school nurse.
Her stepfather was a teacher
and basketball coach.

She lives in Arlington with her
partner, Joanna, and their family.

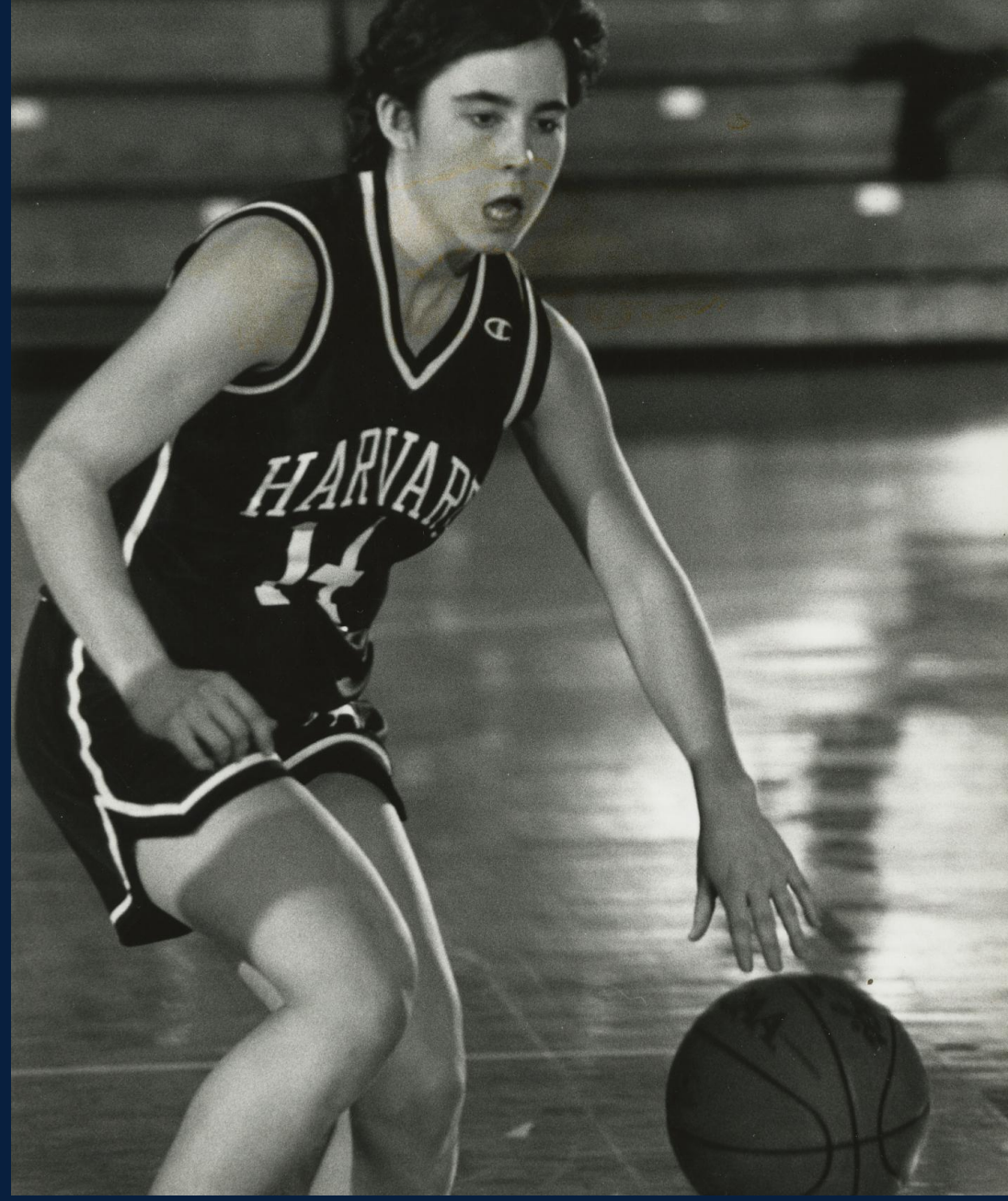
Which two sides give this photo's area?

BASKETBALL IS PART OF HER STORY

HARVARD'S NUMBER 14

Healey co-captained Harvard's team. Then she played professionally in Austria for two years.

What makes a square unit useful for measuring a basketball court?





INSIDE A WORKING OFFICE

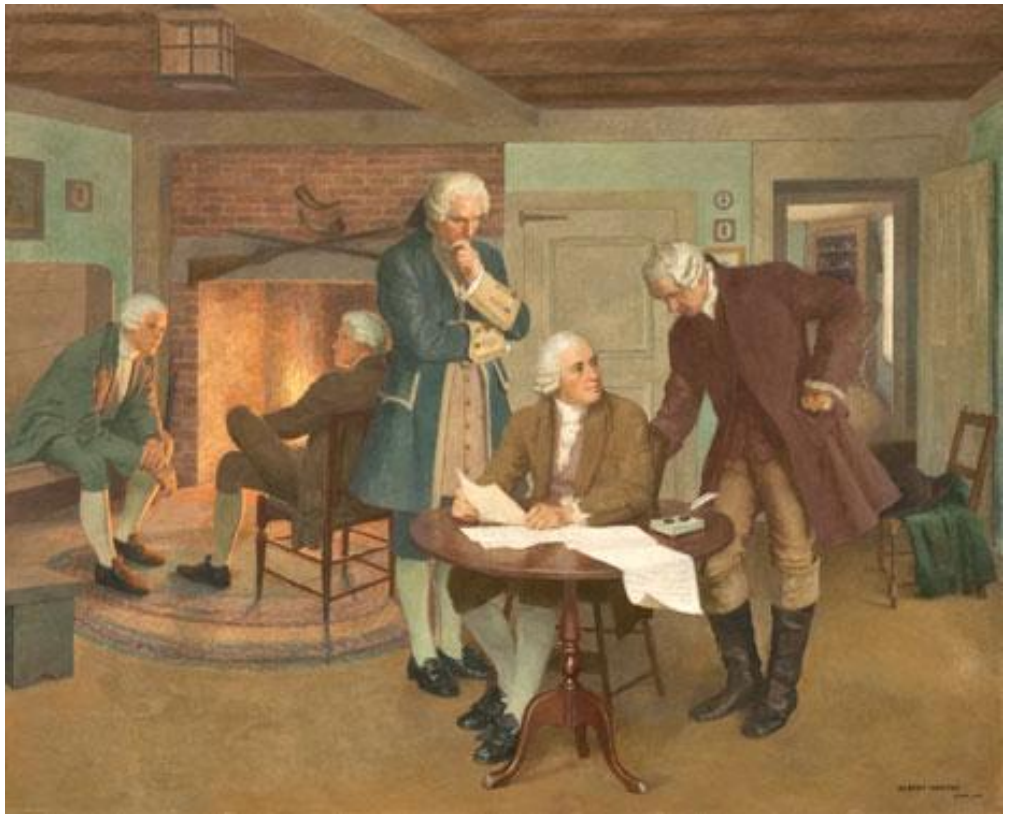
THE GOVERNOR'S OFFICE

The governor works in the State House.

Which objects in this photograph have rectangular faces?

How would you find the area of one?

JOHN ADAMS AND THE CONSTITUTION



John Adams was the main writer of the Massachusetts Constitution of 1780.

This House chamber mural shows Adams working with Samuel Adams and James Bowdoin.

At Station 3: how much display mat will show around the document?

HOW MUCH FLAT SPACE?

RECTANGLE

length × width
Use square units.

IRREGULAR OUTLINE

Count full squares.
Combine pieces along the edges.

BORDER

outside area – opening area

SCALE

A small length can stand
for a larger real length.

YOUR STATION ROUTE

01 Massachusetts flags

02 The governor’s game

03 John Adams’s Constitution

04 The Sacred Cod

05 Blueprint detectives

8 MINUTES

Read the exhibit.
Use the measuring mat.
Write in your own packet.

At the signal, move to
the next station number.
After 5, return to 1.

FLAGS WORTH A CLOSER LOOK



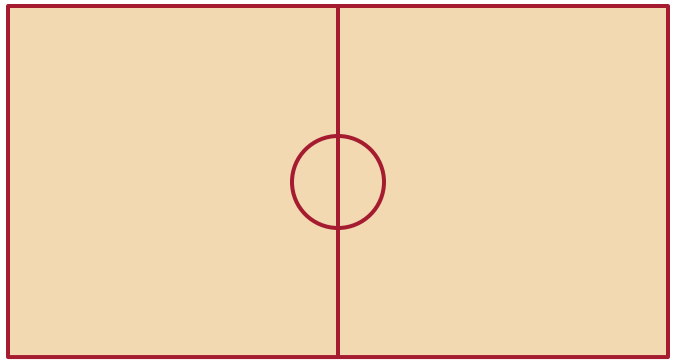
Memorial Hall honors military service.

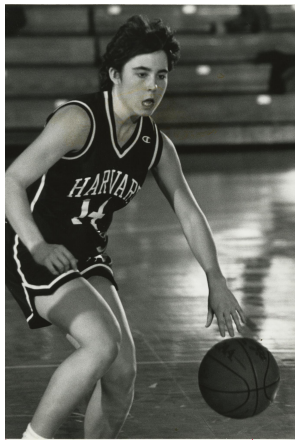
1. Estimate the large flag print's area.

2. Measure both flag rectangles. Find their areas.

3. Compare the areas when both side lengths double.

THE GOVERNOR'S GAME



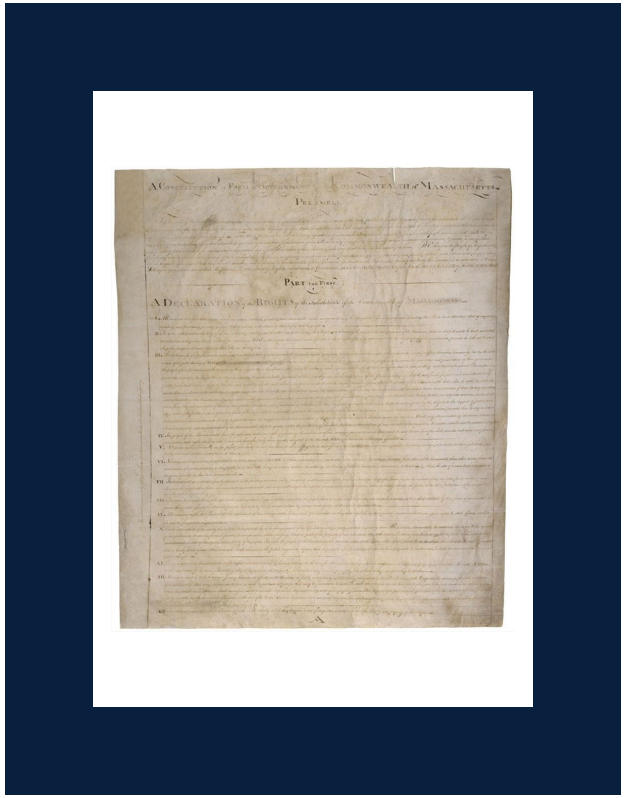


Two prints to measure

Optional: try the real-court scale challenge on the mat.

1. Estimate the court print's area.
2. Round its sides to whole centimeters. Find its area.
3. Measure the photo print. Which print covers more paper?

A FRAME FOR HISTORY

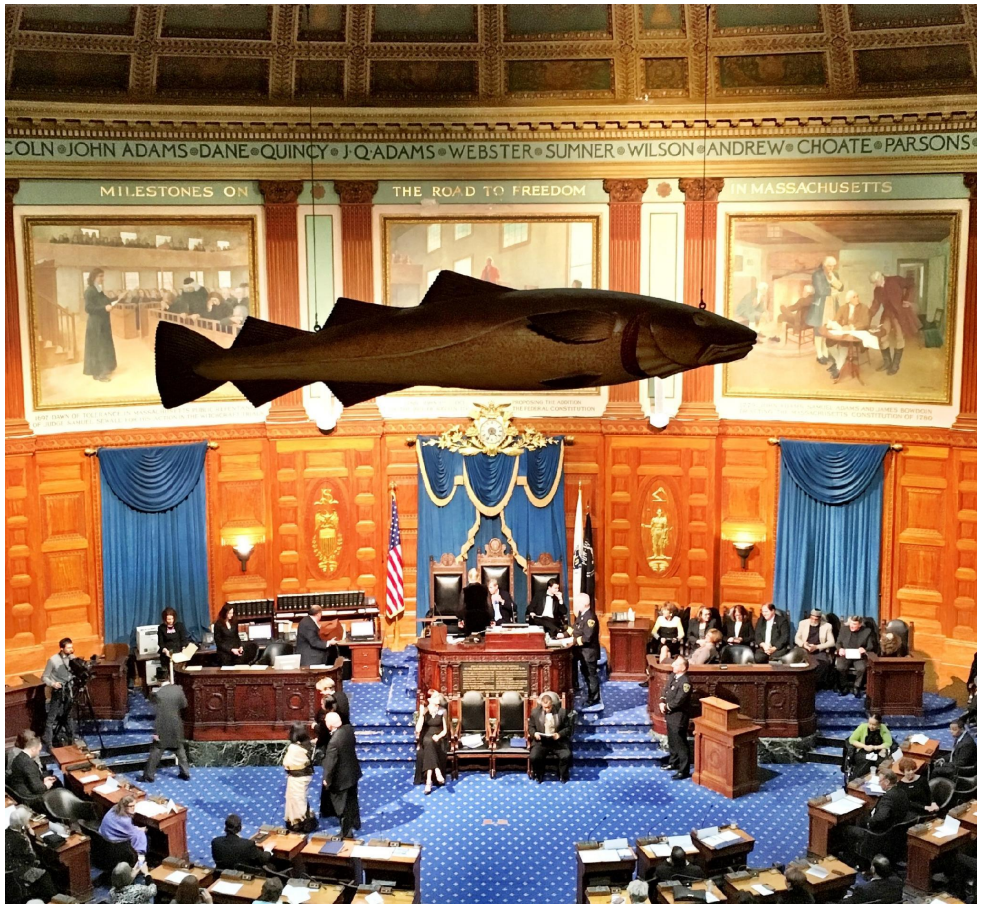


1. Measure the outside rectangle and the white window.

2. Find both areas. Subtract to find the blue mat's area.

3. Finished? Trace a classroom pen's flat footprint on grid paper.

A FISH IN THE HOUSE

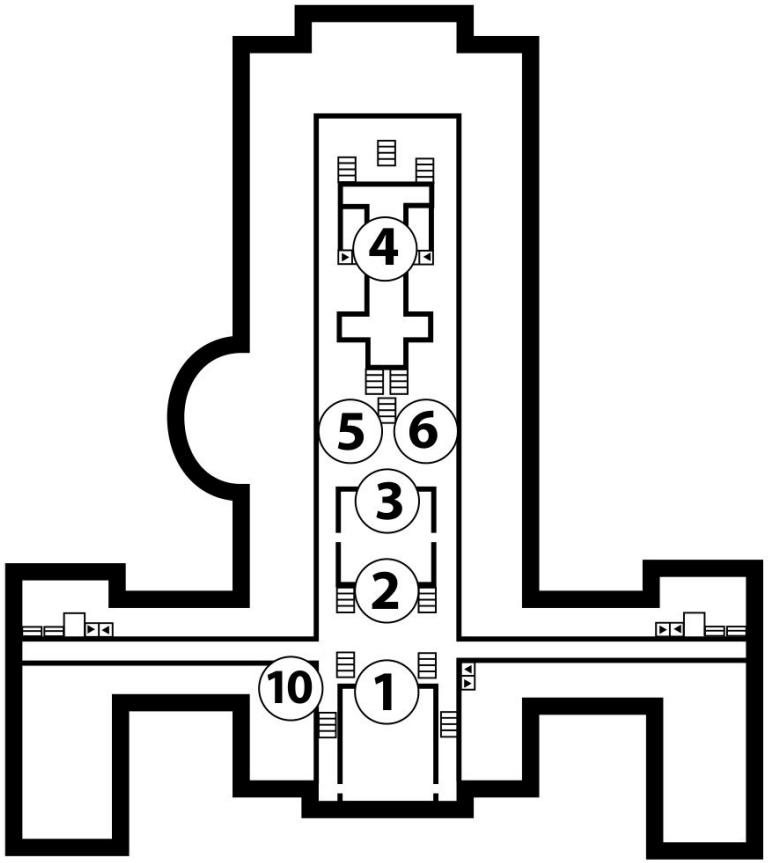




The whole grid is 12 by 4.
How much of it does the fish cover?

Count full squares.
Combine pieces along the edges.

BLUEPRINT DETECTIVES



An 8-by-9 grid surrounds the printed building.

Find the whole grid's area. Then estimate the area inside the building's outside outline.

What information would you need to find the real floor area?

A ROOM UNDER THE DOME



The real Senate Chamber:
55 feet × 55 feet

Model scale: 1 cm = 10 feet
Measure the model's side.
Find its base area.

A chosen model height is 2 cm.
What is the model's volume?

YOUR GROUP'S INVESTIGATION

8

MINUTES PER STATION

Reader: share the exhibit's story.

Measurer: help use the tools.

Checker: ask "Do our units make sense?"

Everyone writes in their own packet.
Switch roles at the next station.

EXACT ANSWERS AND ESTIMATES

EXACT FOR OUR PRINTS

Large flag: 60 cm^2
Small flag: 15 cm^2
Basketball photo: 24 cm^2
Blue display mat: 28 cm^2

REASONABLE ESTIMATES

Court print: about 45 cm^2
Cod print: about 19 cm^2
Map print: about 37 cm^2

Why can two careful groups have different estimates?

MY MEASUREMENT REPORT

A sign measures 8 cm × 6 cm.
A photo inside it measures 5 cm × 4 cm.

1. Find the whole sign’s area.

2. Find the area outside the photo.

3. Name one station that needed an estimate.

4. Share one fact you learned.

THE OBJECTS BEHIND THE MATH

Massachusetts Secretary of the Commonwealth
State House tour, floor plan, Constitution, and John Adams

Massachusetts Legislature
Sacred Cod, John Adams mural, and Senate dimensions

Harvard Athletics, National Governors Association, and NCAA
Healey's biography, basketball history, and court dimensions

Clickable sources and photo credits: teacher guide, pages 6–7.