

# Smartboard Jeopardy

Team 1 Score		Jeopardy			Team 2 Score	
	00					00
0 2 4 6 8					0 2 4 6 8	
1 3 5 7 9					1 3 5 7 9	
Properties of Quadrilaterals	???	Polygon Construction	Coordinate Plane Stuff	Starling Related		
100	100	100	100	100		
200	200	200	200	200		
300	300	300	300	300		
400	400	400	400	400		
500	500	500	500	500		

Lesson notes

# Lesson Notes

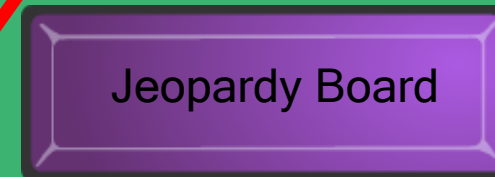
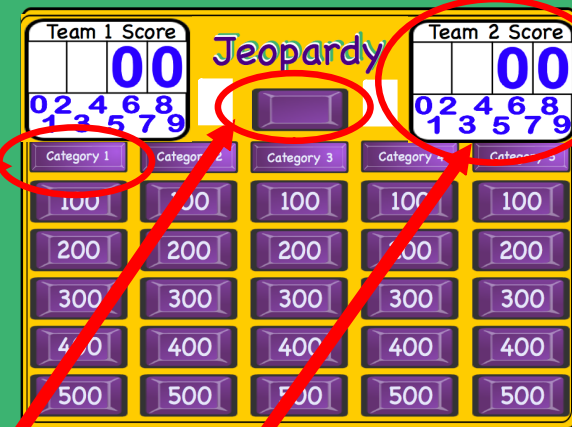
Directions for using this Smartboard Jeopardy template.

Double click on the Category names to edit and change.

Edit each of the Question pages with the Question and Answer. You must move the purple reveal box to enter the correct response, then move the reveal box over the answer until it is covered. After all questions are entered Save As ... and give it another name. This helps preserve the template.

The blank purple button in the center of the Jeopardy board is an Infinite Cloner and is used to place over the question button when you return to the Jeopardy Board. This shows that this button has been chosen and can not be chosen again.

The white cells are for the score keeper to keep score of the teams. Drag the numbers to the cell to change score. Drag the white rectangle to the cell to delete score.



The image shows a Jeopardy board with a yellow background and a green border. At the top center, the word "Jeopardy" is written in a stylized purple font. On the left, "Team 1 Score" is displayed with a large blue "0" and a numeric keypad below it. On the right, "Team 2 Score" is displayed with two large blue "0"s and a numeric keypad below it. The board is divided into five columns by category labels: "Properties of Quadrilaterals", "???", "Polygon Construction", "Area & Perimeter Coordinate Plane", and "Starling Related". Below these labels is a grid of 25 purple question buttons, each containing a value: 100, 200, 300, 400, or 500.

Jeopardy Board

Category 1 - 100

The following is **NOT** true for which  
Quadrilaterals:

- Opposite sides are congruent
- Diagonals bisect each other
- Opposite angles are congruent
- Consecutive angles are Supplementary

**Bonus 100- Name all that these are true for:**

Not True for:

- Trapezoid
- Kite

True for:

- Parallelogram
- Rectangle
- Rhombus
- Square

Jeopardy Board



## Category 1 - 200

If Quadrilateral ABCD is a Rhombus, which statement is **NOT** necessarily true about its diagonals?

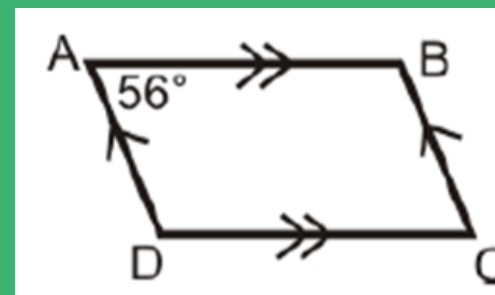
- a) Diagonals Bisect Each other
- b) Diagonals are Congruent
- C) Diagonals are Perpendicular
- D) Diagonals Bisect the Opposite Angles

Jeopardy Board

Diagonals are  
congruent

## Category 1 - 300

In parallelogram ABCD,  $\angle A = 56^\circ$ .  
find the other 3 angles and justify  
your reasoning.



$\angle B = 124$  because opposite angles (D) are congruent, & consecutive angles (A or C) are supplementary.

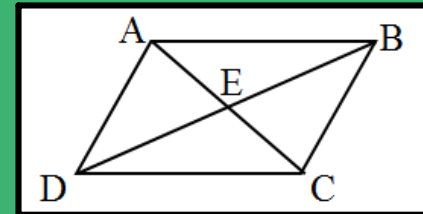
$\angle C = 56$  because opposite angles (A) are congruent, & consecutive angles (D or B) are supplementary.

$\angle D = 124$  because opposite angles (B) are congruent, & consecutive angles (A or C) are supplementary.

Jeopardy Board

## Category 1 - 400

If ABCD is a parallelogram, and  $\angle DAE = 80^\circ$ , find  $\angle BCE$ . Explain how you were able to find that value. What property allows you to determine this?



Jeopardy Board

$\angle BCE = 80^\circ$   
because alternate  
interior angles are  
congruent.

Category 1 - 500

List all of the properties of a Square. Don't forget to include all properties that come before it:

- Quadrilateral
- Parallelogram
- Rectangle
- Rhombus

Jeopardy Board

Quadrilateral- 4 sides, all angles add up to 360 degrees

**Parallelogram**

1. Both pairs of opposite sides are parallel.
2. Both pairs of opposite sides are congruent.
3. One pair of opposite sides are parallel and congruent.
4. Diagonals bisect each other.
5. Both pairs of opposite angles are congruent.
6. Consecutive angles are supplementary.

**Rectangle**

1. All the properties of a parallelogram.
2. Has a right angle.
3. Diagonals are congruent.

**Rhombus**

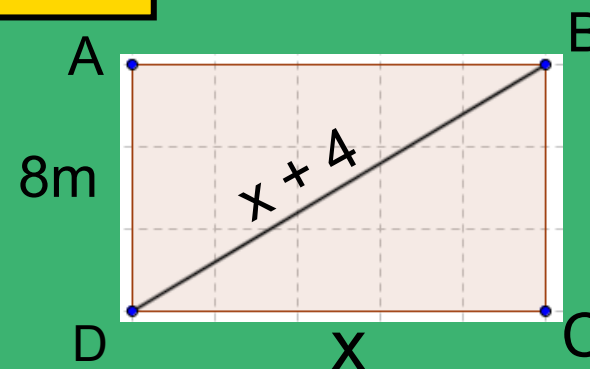
1. All the properties of a parallelogram.
2. All sides are congruent.
3. Diagonals are perpendicular.
4. Diagonals bisect the opposite angles.

**Square**

1. All the properties of a parallelogram.
2. All the properties of a rectangle.
3. All the properties of a rhombus.

## Category 2 - 100

Given rectangle ABCD, find x.



First, since its a rectangle,we know it has 4 right angles. Thus, each triangle is a right triangle. Use Pythagorean Theorem to solve for x:

$$8^2 + x^2 = (x + 4)^2$$

$$64 + x^2 = (x + 4)(x + 4)$$

$$64 + x^2 = x^2 + 8x + 16$$

$$\begin{array}{r} -x^2 \quad -x^2 \\ \hline \end{array}$$

$$64 = 8x + 16$$

$$48 = 8x$$

$$6 = x$$

Jeopardy Board

## Category 2 - 200

Use the given information to find the area and perimeter of the ring box.

First, use Pythagorean Theorem to solve for x:

$$4^2 + x^2 = (x + 2)^2$$

$$16 + x^2 = (x + 2)(x + 2)$$

$$16 + x^2 = x^2 + 4x + 4$$

$$\frac{-x^2 \quad -x^2}{16 = 4x + 4}$$

$$16 = 4x + 4$$

$$12 = 4x$$

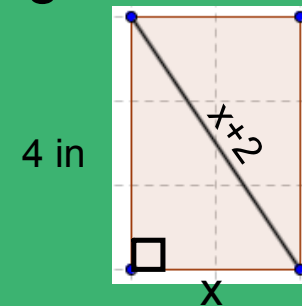
$$3 = x$$

Next, find area & perimeter of the box.

$$A = bh \qquad P = 3 + 3 + 4 + 4 = 14 \text{ in}$$

$$A = 3 * 4$$

$$A = 12 \text{ in}^2$$



Jeopardy Board

## Category 2 - 300

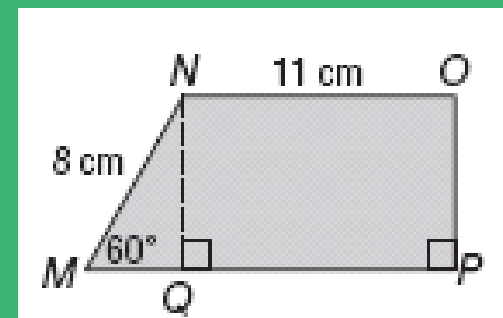
Find the Following:

NQ=

MQ=

MP=

Perimeter of Trapezoid MNOP=



Use  $30^\circ$ - $60^\circ$ - $90^\circ$  triangle to find **MQ** & **NQ**. The altitude of the trapezoid (**NQ**) is  $4\sqrt{3}$  cm and **MQ** is 4 cm. The long base **MP** of the trapezoid is  $4 + 11$  or **15 cm**. **OP** is the same as the altitude,  $4\sqrt{3}$ .  $P = 11 + 8 + 15 + 4\sqrt{3}$   
 $P = 34 + 4\sqrt{3}$  u

Jeopardy Board

Category 2 - 400



Given:  $\square ABCD$

Prove:  $\triangle ABD \cong \triangle CDB$

Statements	Reasons
1) $\square ABCD$	1) Given
2) $BC \cong DA$	2) Opposite sides of a parallelogram are Congruent.
3) $BA \cong DC$	3) Opposite sides of a parallelogram are Congruent.
4) $\angle ABD \cong \angle CDB$	4) Alternate Interior Angles
5) $BD \cong BD$	5) Identity Property
6) $\triangle ABD \cong \triangle CDB$	6) SSS

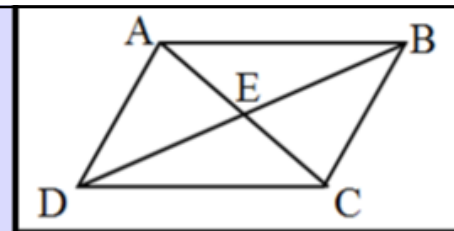
Jeopardy Board

Statements	Reasons
$\square ABCD$	1) Given
$BC \cong DA$	2) Opposite sides of a parallelogram are Congruent.
$BA \cong DC$	3) Opposite sides of a parallelogram are Congruent.
$\angle ABD \cong \angle CDB$	4) Alternate Interior Angles
$BD \cong BD$	5) Identity Property
$\triangle ABD \cong \triangle CDB$	6) SSS

Category 2-400



**Given:** ABCD is a parallelogram  
E is the midpoint of AC  
**Prove:** Diagonals bisect each other



### Statements

- 1) ABCD is a parallelogram
- 2) E is the midpoint of  $\overline{AC}$
- 3)  $\overline{AE} \cong \overline{CE}$
- 4)  $\overline{AB} \parallel \overline{DC}$
- 5)  $\angle BAC \cong \angle DCA$
- 6)  $\angle AEB \cong \angle CED$
- 7)  $\triangle ABE \cong \triangle CDE$
- 8)  $\overline{DE} \cong \overline{EB}$
- 9) E is the midpoint of  $\overline{BD}$
- 10) Diagonals bisect each other

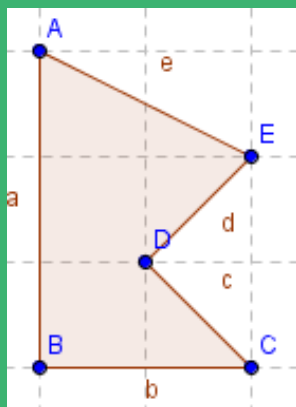
### Reasons

- 1) Given
- 2) Given
- 3) Definition of midpoint
- 4) Defn of a parallelogram
- 5) AIA congruent
- 6) Vertical angles are congruent
- 7) ASA
- 8) CPCTC
- 9) Definition of midpoint
- 10) Definition of bisect

Jeopardy Board

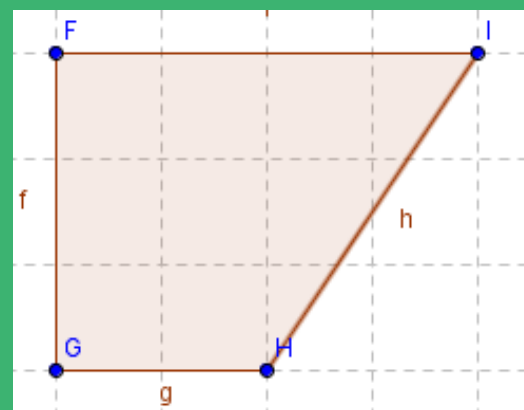
Category 3 - 100

A) What type of Polygon is found below?



- A) Pentagon
- B) Trapezoid

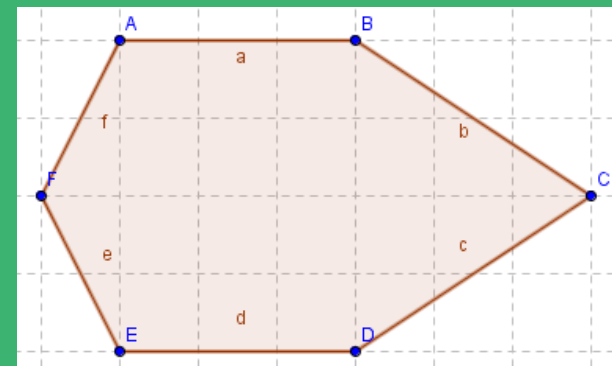
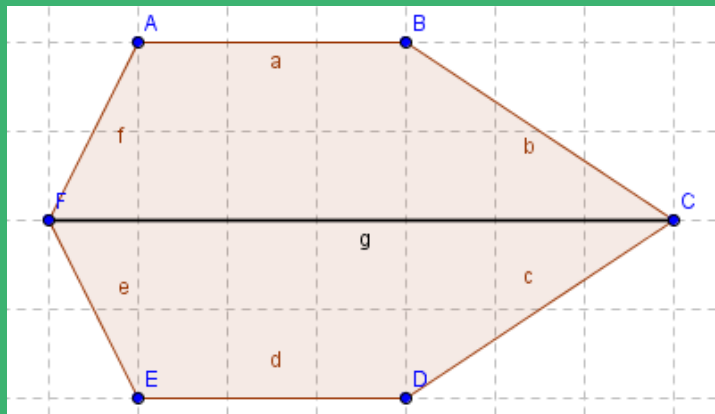
B) What type of Quadrilateral is found below?



Jeopardy Board

# Category 3 - 200

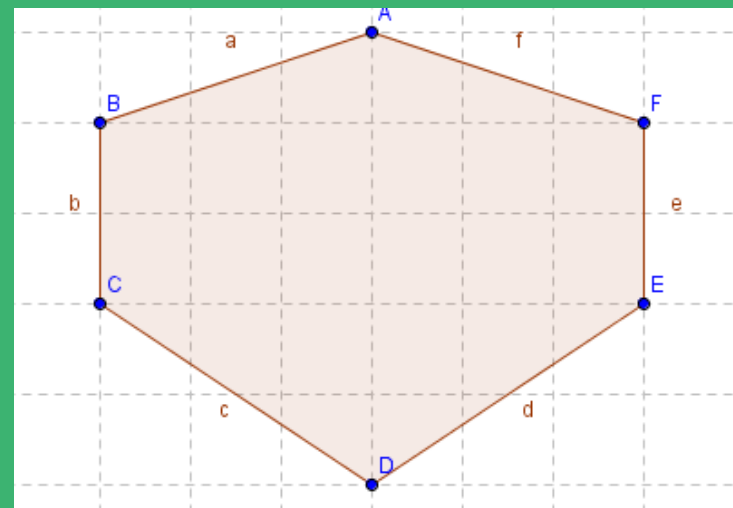
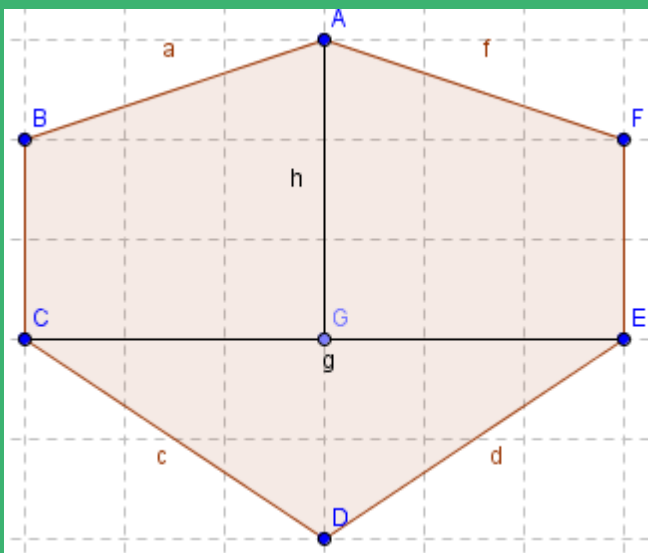
Separate the composite figure into 2 congruent Trapezoids.



Jeopardy Board

# Category 3 - 300

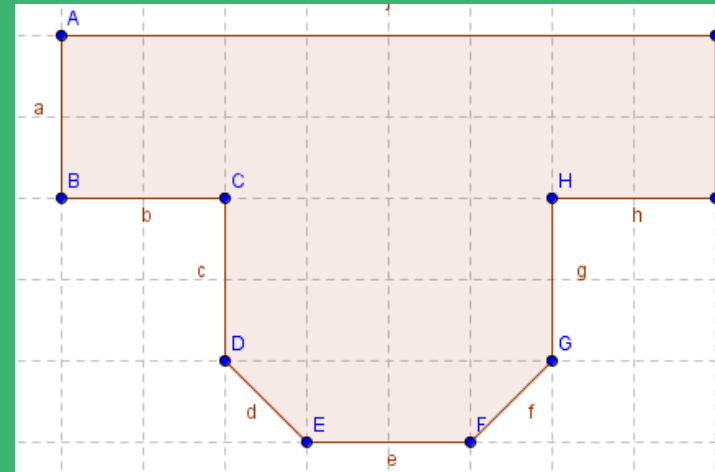
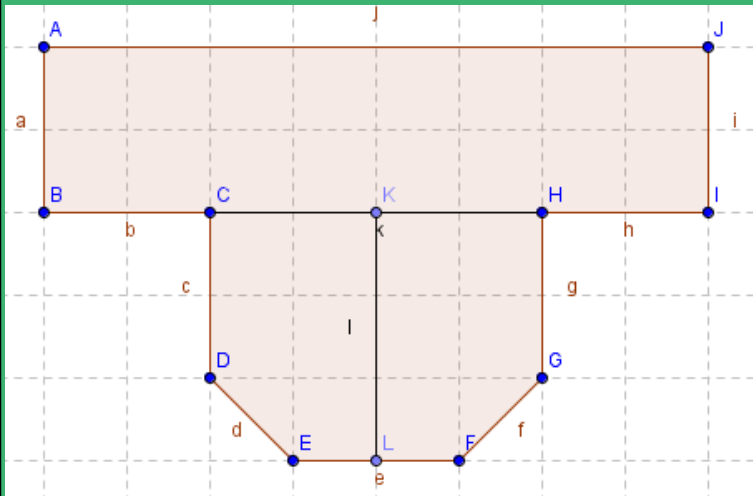
Separate the composite figure into 2 congruent Trapezoids and 1 Triangle.



Jeopardy Board

# Category 3 - 400

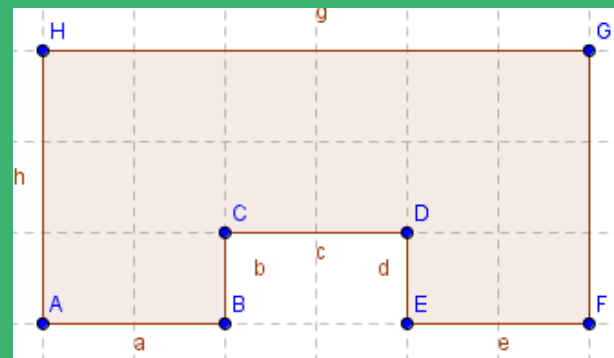
Separate the composite figure into 2 congruent Pentagons and 1 Rectangle.



Jeopardy Board

# Category 3 - 500

The following composite figure can be separated into smaller polygons. Which of the following is not a possible combination of polygons? Draw out the possible choices.



- A) 3 Rectangles
- B) 2 Rectangles, 1 Square
- C) 1 Trapezoid, 3 Triangles
- D) 3 Trapezoids

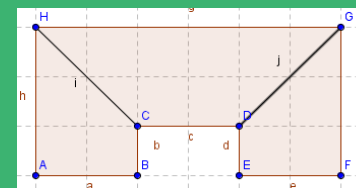
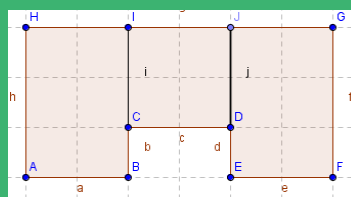
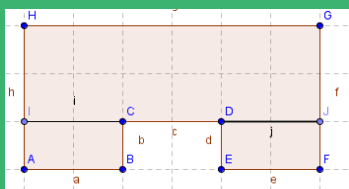
Jeopardy Board

C) 1 Trapezoid, 3 Triangles Cannot happen

A) 3 Rectangles

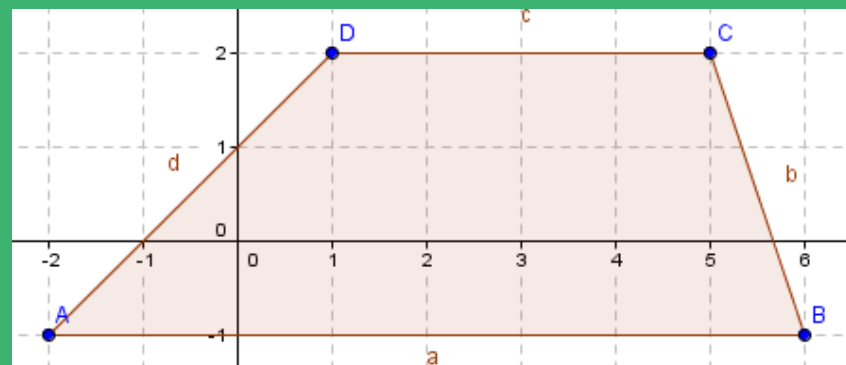
B) 2 Rectangles, 1 Square

D) 3 Trapezoids



## Category 4 - 100

Find the area of  
Quadrilateral ABCD.  
Show all work.



ABCD is a Trapezoid. Use this Formula:

Trapezoid  $A = \frac{1}{2}h(b_1 + b_2)$

$$B = 8, B = 4, h = 3, \text{ so } A = \frac{1}{2}(3)(8 + 4)$$

$$A = \frac{1}{2}(3)(12)$$

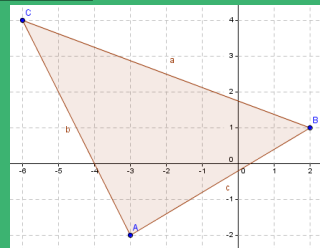
$$A = \frac{1}{2}(36)$$

$$A = 18 \text{ u}^2$$

Jeopardy Board

Category 4 - 200

Find the area of triangle ABC if  $\angle A$  is a right angle. Discuss with your group what formulas you will use. Show all of your work.



$$A = \frac{1}{2}bh$$

The Distance Formula is  $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

Jeopardy Board

Use the distance formula to find the length of the base (AB) and the height (AC).

Go to 400

A (-3,-2), B (2, 1), C (-6, 4)

$$AB = \sqrt{(2 - -3)^2 + (1 - -2)^2}$$

$$AC = \sqrt{(-3 - -6)^2 + (-2 - 4)^2}$$

$$AB = \sqrt{(5)^2 + (3)^2}$$

$$AC = \sqrt{(3)^2 + (-6)^2}$$

$$AB = \sqrt{25 + 9}$$

$$AC = \sqrt{9 + 36}$$

$$AB = \sqrt{34}$$

$$AC = \sqrt{45}$$

$$A = \frac{1}{2}bh$$

$$A = \frac{1}{2} (\sqrt{34})(\sqrt{45})$$

$$A = \frac{1}{2} (\sqrt{1530})$$

$$A = \frac{1}{2} (3)(\sqrt{170})$$

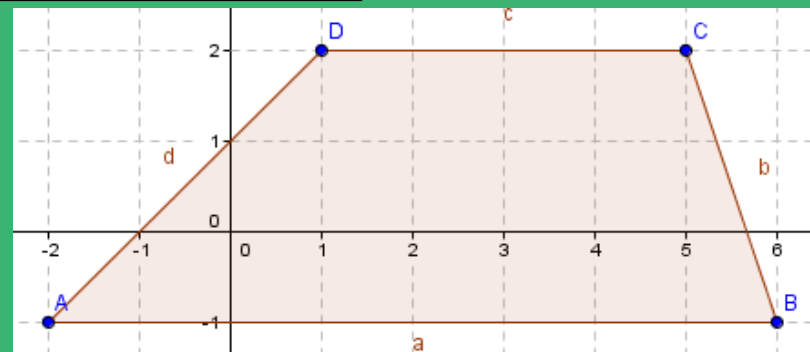
$$A = 1.5\sqrt{170} \text{ u}^2$$

or about 19.56u<sup>2</sup>



## Category 4 - 300

Find the perimeter of  
Quadrilateral ABCD.  
Show all work.



For Perimeter, Use distance formula:

The Distance Formula is  $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

Jeopardy Board

A (-2,-1), B(6,-1), C(5,2), D(1,2)

DC = 4 & AB = 8 DA =  $3\sqrt{2}$ , CB =  $\sqrt{10}$

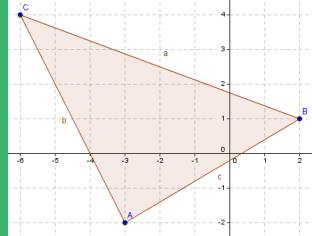
$P = 4 + 8 + 3\sqrt{2} + \sqrt{10}$

$P = 12 + 3\sqrt{2} + \sqrt{10}$  u

Find the perimeter of triangle ABC. Discuss with your group what formulas you will use. Show all of your work.

Category 4 - 400

Jeopardy Board



The Distance Formula is  $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

Use the distance formula to find the length of the base (AB) and the height (AC).  
A (-3, -2), B (2, 1), C (-6, 4)

$$AB = \sqrt{(2 - -3)^2 + (1 - -2)^2} \quad AC = \sqrt{(-3 - -6)^2 + (-2 - 4)^2}$$

$$AB = \sqrt{(5)^2 + (3)^2} \quad AC = \sqrt{(3)^2 + (-6)^2}$$

$$AB = \sqrt{25 + 9} \quad AC = \sqrt{9 + 36}$$

$$AB = \sqrt{34} \quad AC = \sqrt{45}$$

$$BC = \sqrt{(2 - -6)^2 + (1 - 4)^2}$$

$$BC = \sqrt{(8)^2 + (-3)^2}$$

$$BC = \sqrt{64 + 9}$$

$$BC = \sqrt{73}$$

$$P = \sqrt{45} + \sqrt{34} + \sqrt{73}$$

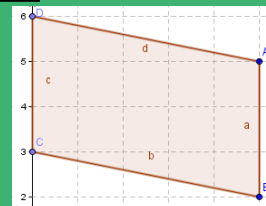
$$P = \sqrt{9 \cdot 5} + \sqrt{34} + \sqrt{73}$$

$$P = 3\sqrt{5} + \sqrt{34} + \sqrt{73}$$

Category 4-400

## Category 4 - 500

Find the area and perimeter of quadrilateral ABCD. Discuss with your group what formulas you will use. Show all work.



AB can be used as a base.

$$B = 3 \quad H = 5. \quad A = bh$$

$$A = (3)(5)$$

$$A = 15u^2$$

For Perimeter, Use distance formula:

$$\text{The Distance Formula is } d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

A (5,5), B(5,2), C(0,3), D(0,6)

$$\begin{aligned} AB &= 3 & A &= bh \\ CD &= 3 & A &= 3 \cdot 5 \\ h &= 5 & A &= 15u^2 \end{aligned}$$

$$\begin{aligned} CB &= \sqrt{(5-0)^2 + (2-3)^2} \\ &= \sqrt{5^2 + (-1)^2} \\ &= \sqrt{25+1} \end{aligned}$$

$$CB = \sqrt{26}$$

$$\begin{aligned} AD &= \sqrt{(5-0)^2 + (5-6)^2} \\ &= \sqrt{5^2 + (-1)^2} \\ &= \sqrt{25+1} \\ AD &= \sqrt{26} \end{aligned}$$

$$P = 3 + 3 + \sqrt{26} + \sqrt{26}$$

$$P = \boxed{6 + 2\sqrt{26}u}$$

Jeopardy Board

## Category 5 - 100

Entering his Redshirt Junior Year, this Current UCLA Quarterback from Chandler, AZ is a pre-season Heisman Trophy candidate, having thrown for 6816 yards, 53 TDs, and 67% completion percentage.

Brett Hundley



Jeopardy Board



Category 5 - 200

When I played High School Football, I wore this jersey number.

Jeopardy Board

#78

Category 5-200

**Category 5 - 300**

In order from least recent to most recent, name the 3 states in which I've lived. 100 bonus points for naming the cities as well.

Jeopardy Board

1. Los Angeles, CA
2. Philadelphia, PA
3. Phoenix, AZ

Category 5 - 400

The AMC series, The Walking Dead, about a zombie apocalypse overtaking the world, is primarily based in what Southern U.S. city?

Atlanta, GA

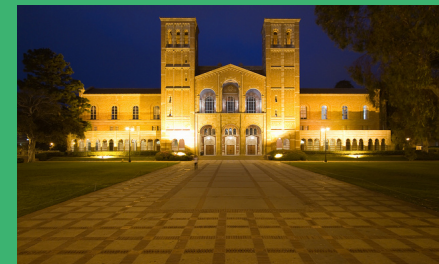
Jeopardy Board





Category 5 - 500

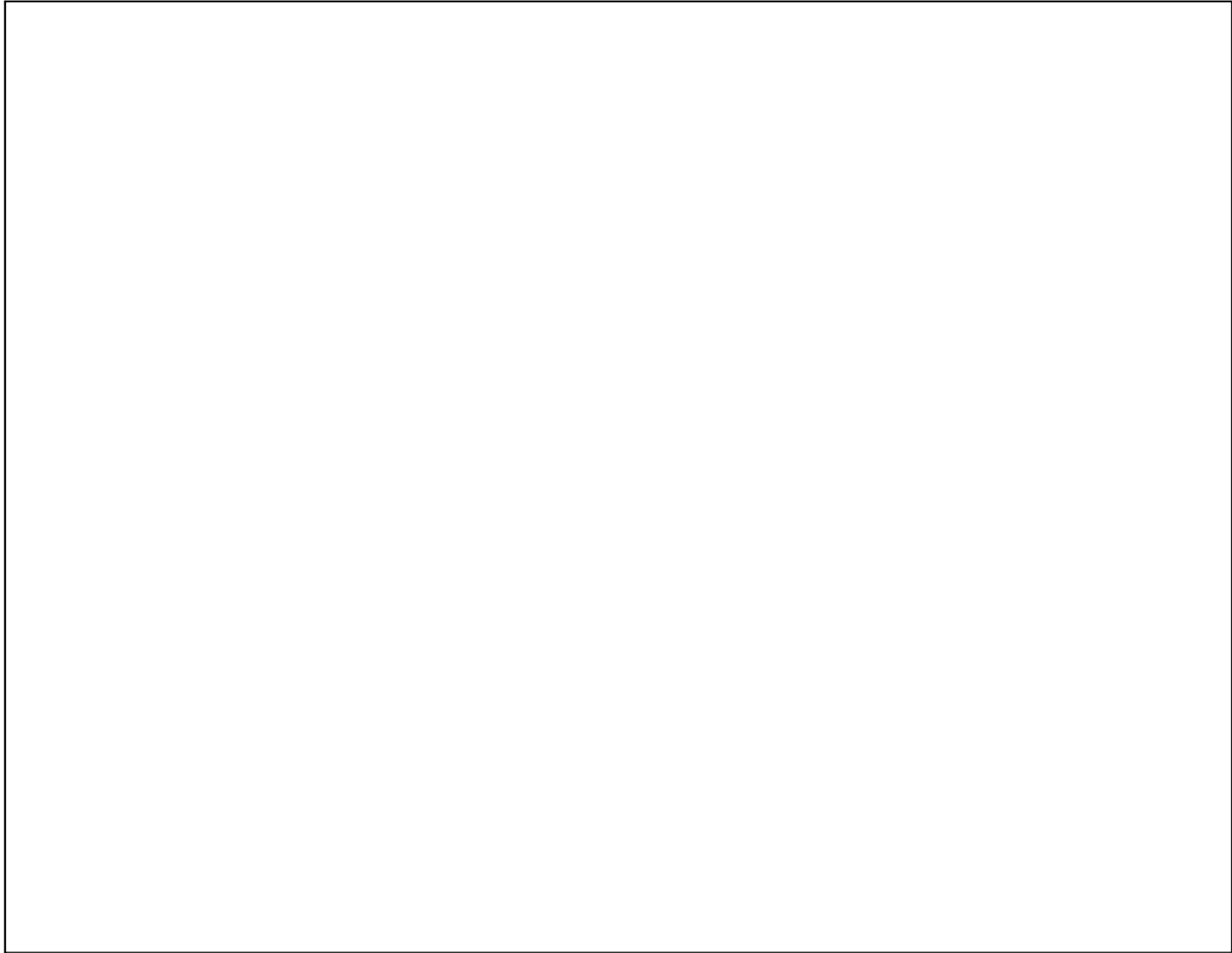
This concert hall on the UCLA campus was one of the 4 original buildings of the university, and is home to several lectures, classes, concerts, and plays held regularly.



Royce Hall

Jeopardy Board





Feb 25-7:50 AM