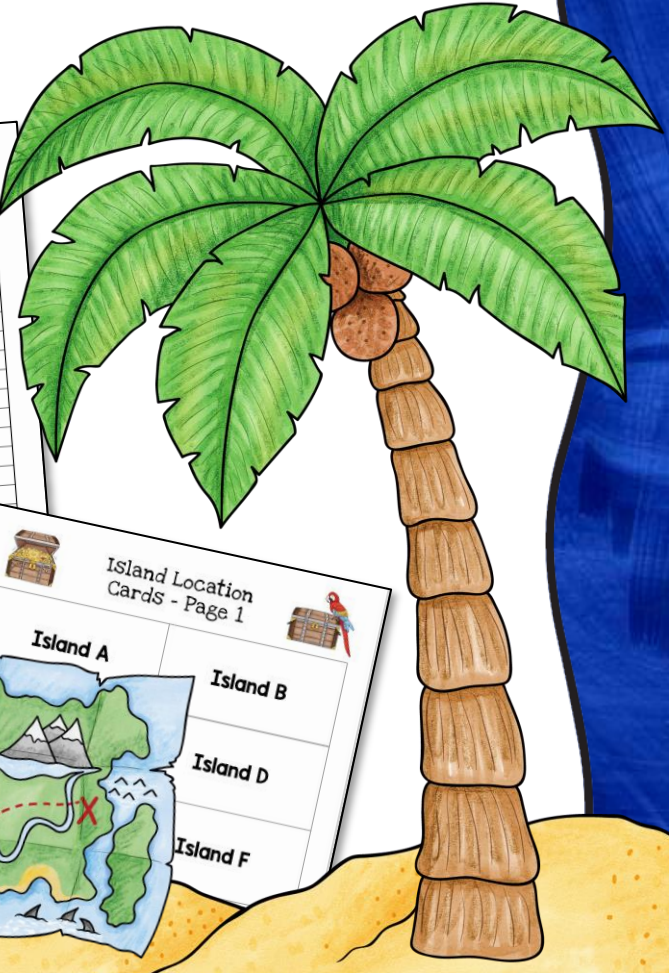
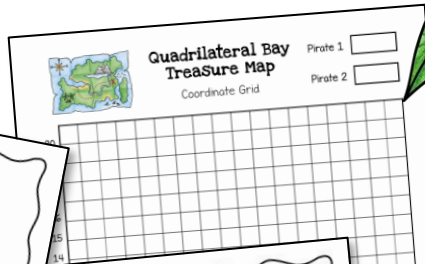
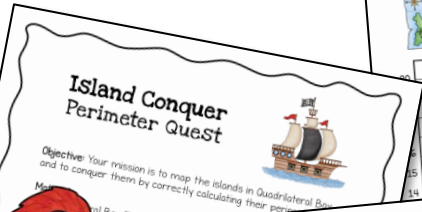


Island Conquer!

Area & Perimeter Math Partner Game





Island Conquer

Area & Perimeter Quest

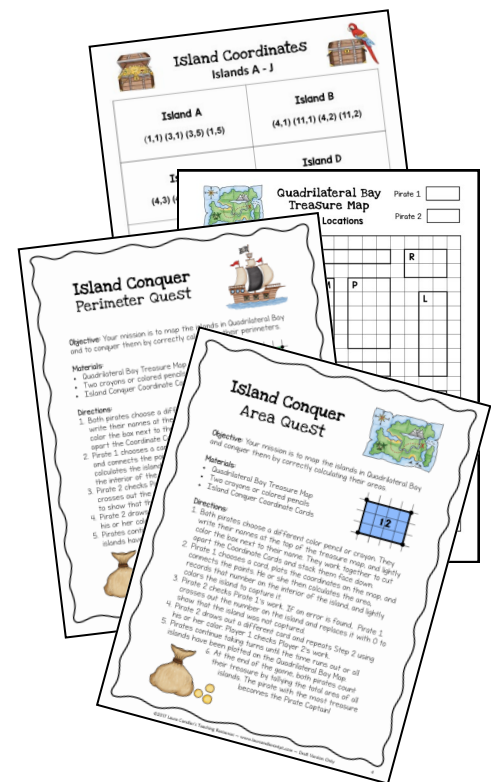


Created by Laura Candler

Island Conquer is a pirate-themed partner math game that involves finding the area and perimeter of rectangular “islands” located on a grid. There are two variations of the game. To play the easier game, Level 1, students are only required to find the area or the perimeter of each island. To play the Level 2 game, students must first use given coordinates to find the location of each island on a coordinate grid, and then they find its area or perimeter. This teacher’s guide includes teacher and student directions, printable game materials, and answer keys.

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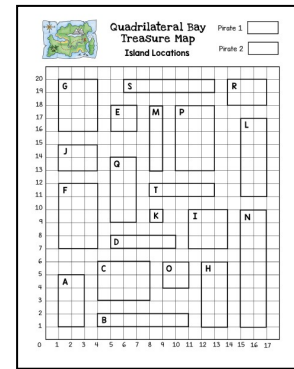


Common Core Alignment

Island Conquer is aligned with the 3rd and 5th grade math Common Core standards, but those standards are not written on the student printables. For more information about the specific standards addressed by this activity, refer to page 21 in this packet.

Object of the Game

The object of Island Conquer is for the players to conquer the islands in Quadrilateral Bay by correctly calculating their area or perimeter. At the end of the game, both pirates count their “treasure” by calculating the total area or perimeter of all the islands they have captured. The pirate with the most treasure is the winner and is declared Pirate Captain for that round.

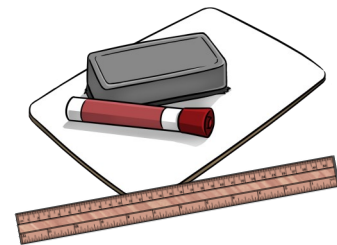


Advanced Preparation

Before you prepare the game materials, review the directions for each game and decide which version you plan to use. The materials are slightly different for each game, so print only the items you need for the game you selected. For each game, you'll need one copy of the directions, one answer key, one treasure map and two different colored pencils. You'll also need one set of Island Location Cards or Island Coordinate Cards for each game. Both levels include two sets of directions; one for finding the area and the other for finding the perimeter. To avoid confusion, you may want to print them and their corresponding answer keys on different colors of paper.

Optional Game Materials

- **Dry Erase Board & Markers or Pencil & Paper**
Some students may be able to find area and perimeter by counting on the grid or using mental math, but others might benefit from solving the problems on dry erase boards or paper.
- **Centimeter Rulers**
The treasure map is on a centimeter grid, so each cell measures 1 cm by 1 cm. These dimensions make it easy for students to check the islands' perimeters by measuring them with a ruler. The directions don't mention using a ruler, but you can add this requirement if you wish.



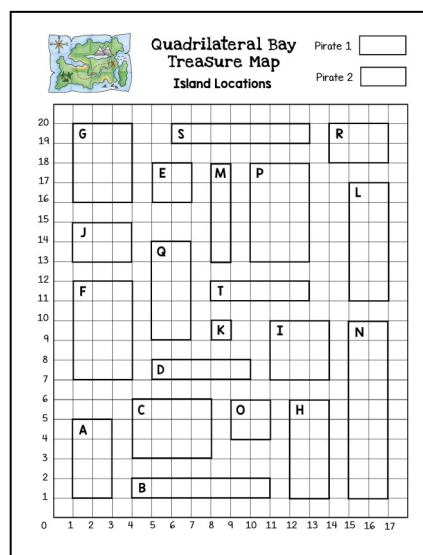
Tips for Introducing Island Conquer

The first time your students play Island Conquer, introduce the game to them as a class and review the directions. Display a copy of the treasure map and ask two volunteers to model the directions as you read them aloud.

Island Conquer Level 2 requires students to plot points on a coordinate grid in order to locate the islands on the blank map. Be sure to demonstrate how to do this before students begin playing. Include a copy of the Island Locations Answer Key in each packet of game materials. Students can refer to the key and check each island's location before they calculate its area or perimeter.

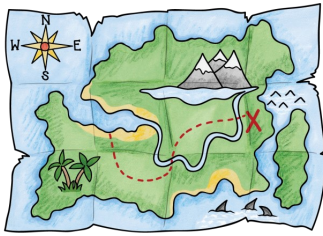
Island Conquer Level I

Area & Perimeter Only



Level I Printables

Quadrilateral Bay Treasure Map	5
Island Location Cards.....	6-7
Perimeter Quest Directions	8
Perimeter Quest Answer Key.....	9
Area Quest Directions.....	10
Area Quest Answer Key	11

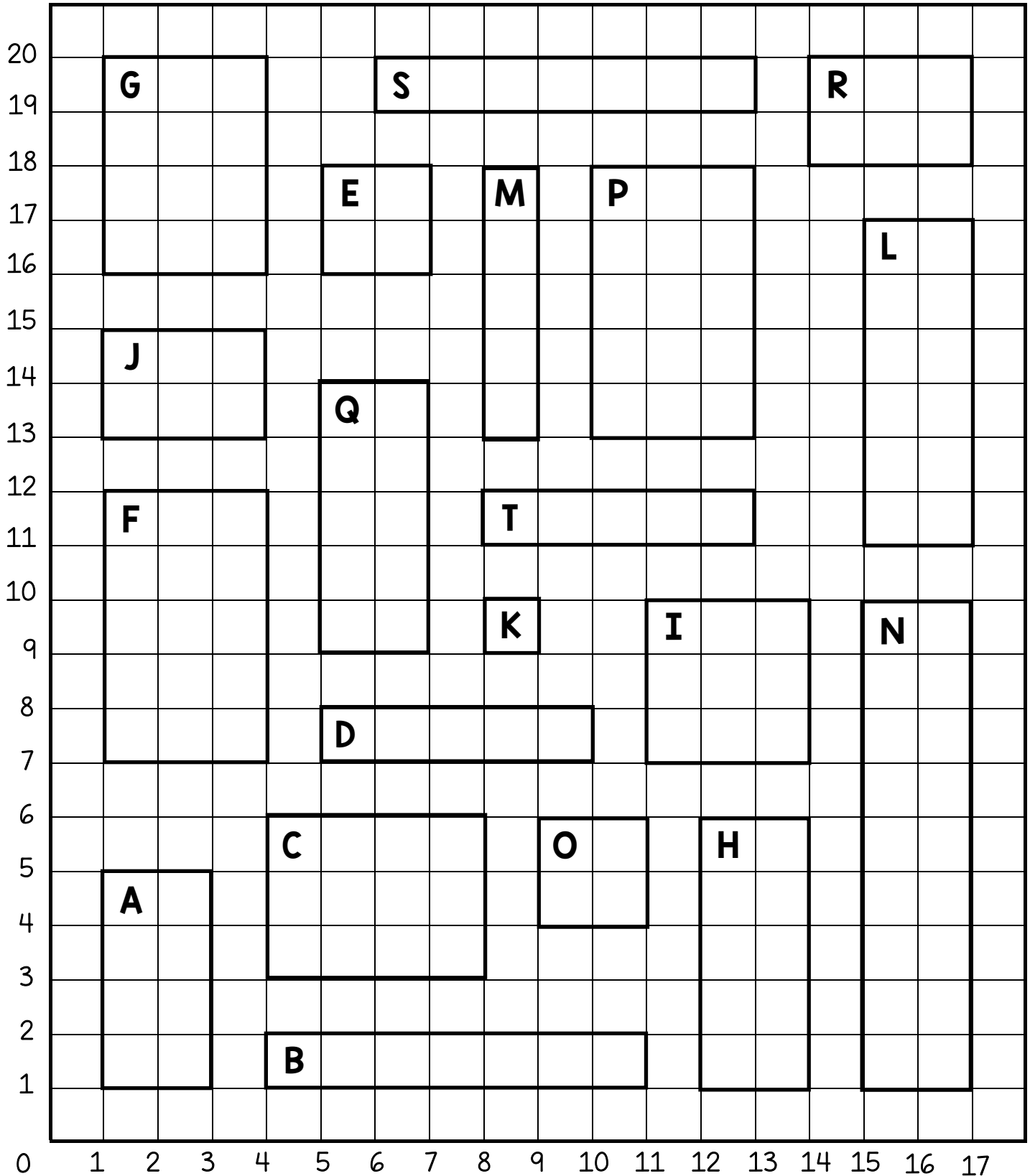


Quadrilateral Bay Treasure Map

Island Locations

Pirate 1

Pirate 2





Island Location Cards - Page 1



Island A

Island B

Island C

Island D

Island E

Island F

Island G

Island H

Island I

Island J



Island Location Cards - Page 2



Island K

Island L

Island M

Island N

Island O

Island P

Island Q

Island R

Island S

Island T

Island Conquer Perimeter Quest

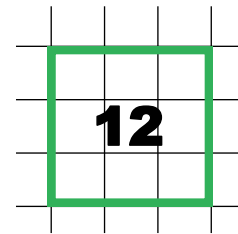
Level I



Objective: Your mission is to map the islands in Quadrilateral Bay and to conquer them by correctly calculating their perimeters.

Materials:

- Quadrilateral Bay Treasure Map
- Two different color crayons or colored pencils
- Island Location Cards
- Island Quest Perimeter Answer Key



Directions:

1. Both pirates choose a different color pencil or crayon. They write their names at the top of the map, and lightly color the box next to their name. They work together to cut apart the Island Cards, shuffle them, and stack them face down.
2. Pirate 1 chooses a card and announces the letter of the island that was selected. He or she then calculates the island's perimeter and records that number inside the it on the map.
3. Pirate 2 checks Pirate 1's work. If correct, Pirate 1 outlines the island in his or her color to show that it was captured. If an error is found, Pirate 1 crosses out the number and replaces it with 0 to show that the island was not captured.
4. Pirate 2 draws out a different card and repeats Step 2 using his or her color. Pirate 1 checks Pirate 2's work.
5. Pirates continue taking turns until the time runs out or until all islands on the Quadrilateral Bay Map have been claimed.
6. At the end of the game, both pirates count their treasure by tallying the total perimeter of all islands. The pirate with the most treasure becomes the Pirate Captain!





Island Conquer Game

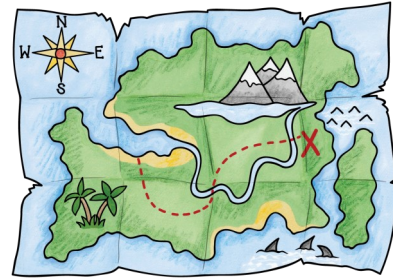
Perimeter Answer Key

Island	Perimeter
A	12
B	16
C	14
D	12
E	8
F	16
G	14
H	14
I	12
J	10

Island	Perimeter
K	4
L	16
M	12
N	22
O	8
P	16
Q	14
R	10
S	16
T	12

Island Conquer Area Quest

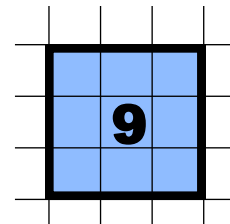
Level I



Objective: Your mission is to map the islands in Quadrilateral Bay and conquer them by correctly calculating their areas.

Materials:

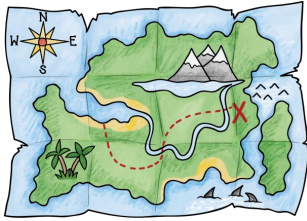
- Quadrilateral Bay Treasure Map
- Two different color crayons or colored pencils
- Island Cards



Directions:

1. Both pirates choose a different color pencil or crayon. They write their names at the top of the map, and lightly color the box next to their name. They work together to cut apart the Island Cards, shuffle them, and stack them face down.
2. Pirate 1 chooses a card and announces the letter of the island that was selected. He or she then calculates it's area and records that number on the interior of the island.
3. Pirate 2 checks Pirate 1's work. If correct, Pirate 1 lightly colors the island to capture it. If an error is found, Pirate 1 crosses out the number on the island and replaces it with 0 to show that the island was not captured.
4. Pirate 2 draws out a different Island Card and repeats Step 2 using his or her color. Pirate 1 checks Pirate 2's work.
5. Pirates continue taking turns until the time runs out or until all islands on the Quadrilateral Bay Map have been claimed.
6. At the end of the game, both pirates count their treasure by tallying the total area of all islands. The pirate with the most treasure becomes the Pirate Captain!





Island Conquer Game

Area Answer Key

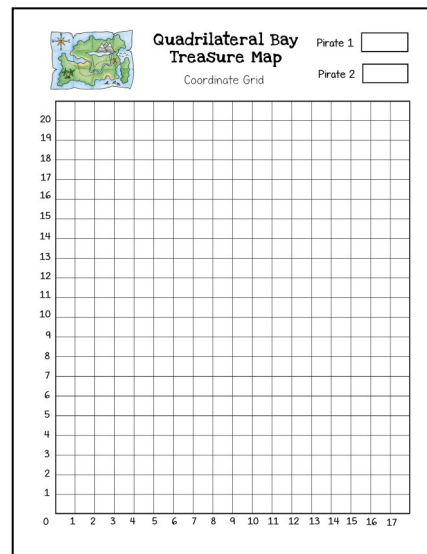
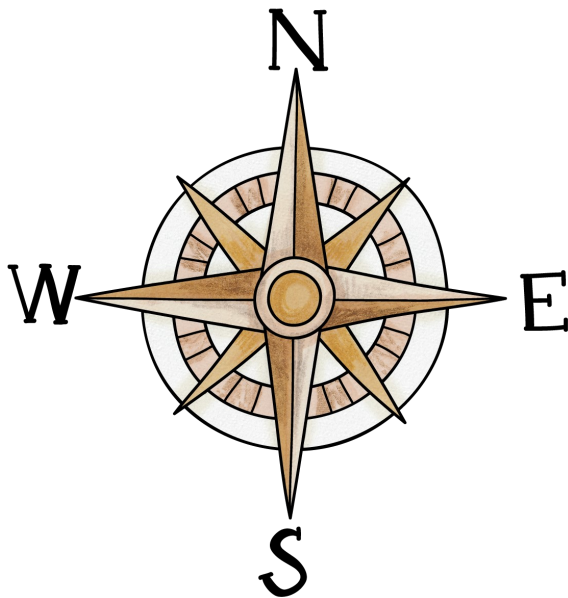
Island	Area
A	8
B	7
C	12
D	5
E	4
F	15
G	12
H	10
I	9
J	6

Island	Area
K	1
L	12
M	5
N	18
O	4
P	15
Q	10
R	6
S	7
T	5

Island Conquer

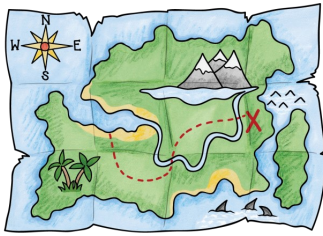
Level 2

Area & Perimeter with Coordinate Graphing



Level 2 Printables

Quadrilateral Bay Treasure Map	13
Island Coordinates Cards	14–15
Perimeter Quest Directions	16
Perimeter Answer Key	17
Area Quest Directions	18
Area Answer Key	19
Island Locations Answer Key	20

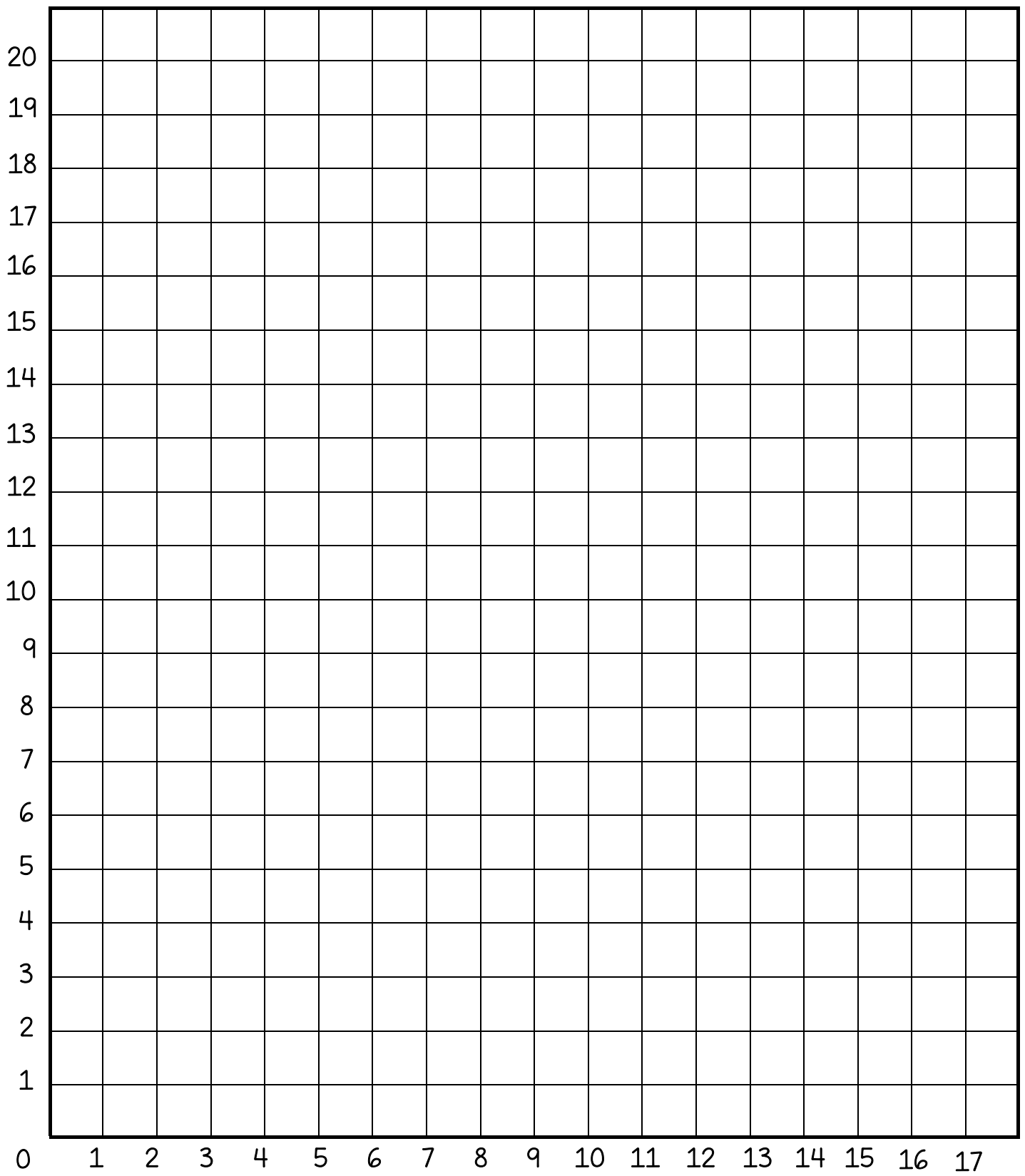


Quadrilateral Bay Treasure Map

Pirate 1

Pirate 2

Coordinate Grid





Island Coordinates

Islands A - J



<p>Island A</p> <p>(1,1) (3,1) (3,5) (1,5)</p>	<p>Island B</p> <p>(4,1) (11,1) (4,2) (11,2)</p>
<p>Island C</p> <p>(4,3) (4,6) (8,3) (8,6)</p>	<p>Island D</p> <p>(5,7) (5,8) (10,7) (10,8)</p>
<p>Island E</p> <p>(5,16) (5,18) (7,16) (7,18)</p>	<p>Island F</p> <p>(1,7) (4,7) (1,12) (4,12)</p>
<p>Island G</p> <p>(1,16) (1, 20) (4,16) (4, 20)</p>	<p>Island H</p> <p>(12,1) (12,6) (14,1) (14,6)</p>
<p>Island I</p> <p>(11,7) (11,10) (14,7) (14,10)</p>	<p>Island J</p> <p>(1,13) (1,15) (4,13) (4,15)</p>



Island Coordinates

Islands K - U



<p>Island K</p> <p>(8,9) (9,9) (8,10) (9,10)</p>	<p>Island L</p> <p>(15,11) (17,11) (15,17) (17,17)</p>
<p>Island M</p> <p>(8,13) (9,13) (8,18) (9,18)</p>	<p>Island N</p> <p>(15,1) (17,1) (15,10) (17,10)</p>
<p>Island O</p> <p>(9,4) (9,6) (11,4) (11,6)</p>	<p>P</p> <p>(10,13) (10,18) (13,13) (13,18)</p>
<p>Island Q</p> <p>(5,9) (5,14) (7,9) (7,14)</p>	<p>Island R</p> <p>(14,18) (17,18) (14, 20) (17, 20)</p>
<p>Island S</p> <p>(6,19) (6,20) (13,19) (13,20)</p>	<p>Island T</p> <p>(8,11) (8,12) (13,11) (13,12)</p>

Island Conquer Perimeter Quest

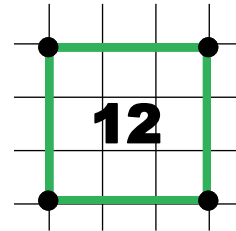
Level 2



Objective: Your mission is to map the islands in Quadrilateral Bay and to conquer them by correctly calculating their perimeters.

Materials:

- Quadrilateral Bay Treasure Map
- Two different color crayons or colored pencils
- Island Conquer Coordinate Cards



Directions:

1. Both pirates choose a different color pencil or crayon. They write their names at the top of the map, and lightly color the box next to their name. They work together to cut apart the Coordinate Cards, shuffle them, and stack them face down.
2. Pirate 1 chooses a card, plots the coordinates on the map, and connects the points with a colored line. He or she then calculates the island's perimeter and records that number on the interior of the island.
3. Pirate 2 checks Pirate 1's work. If an error is found, Pirate 1 crosses out the number on the island and replaces it with 0 to show that the island was not captured.
4. Pirate 2 draws out a different card and repeats Step 2 using his or her color. Pirate 1 checks Pirate 2's work.
5. Pirates continue taking turns until the time runs out or all islands have been plotted on the Quadrilateral Bay Map.
6. At the end of the game, both pirates count their treasure by tallying the total perimeter of all islands. The pirate with the most treasure becomes the Pirate Captain!





Island Conquer Game

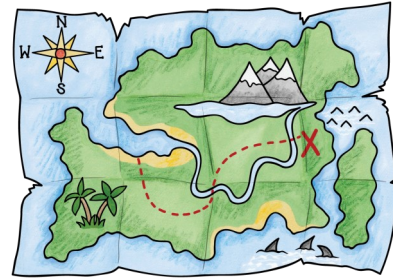
Perimeter Answer Key

Island	Perimeter
A	12
B	16
C	14
D	12
E	8
F	16
G	14
H	14
I	12
J	10

Island	Perimeter
K	4
L	16
M	12
N	22
O	8
P	16
Q	14
R	10
S	16
T	12

Island Conquer Area Quest

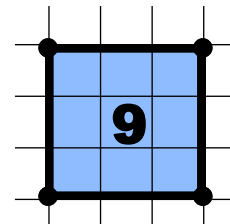
Level 2



Objective: Your mission is to map the islands in Quadrilateral Bay and conquer them by correctly calculating their areas.

Materials:

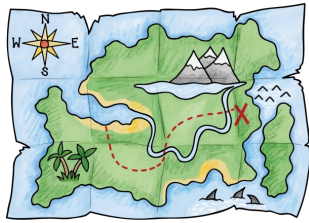
- Quadrilateral Bay Treasure Map
- Two different color crayons or colored pencils
- Island Conquer Coordinate Cards



Directions:

1. Both pirates choose a different color pencil or crayon. They write their names at the top of the treasure map, and lightly color the box next to their name. They work together to cut apart the Coordinate Cards and stack them face down.
2. Pirate 1 chooses a card, plots the coordinates on the map, and connects the points. He or she then calculates the area, records that number on the interior of the island, and lightly colors the island to capture it.
3. Pirate 2 checks Pirate 1's work. If an error is found, Pirate 1 crosses out the number on the island and replaces it with 0 to show that the island was not captured.
4. Pirate 2 draws out a different card and repeats Step 2 using his or her color. Player 1 checks Player 2's work.
5. Pirates continue taking turns until the time runs out or all islands have been plotted on the Quadrilateral Bay Map.
6. At the end of the game, both pirates count their treasure by tallying the total area of all islands. The pirate with the most treasure becomes the Pirate Captain!



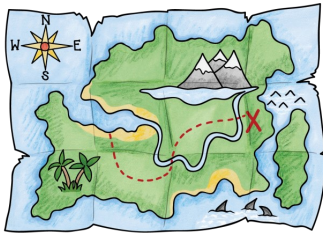


Island Conquer Game

Area Answer Key

Island	Area
A	8
B	7
C	12
D	5
E	4
F	15
G	12
H	10
I	9
J	6

Island	Area
K	1
L	12
M	5
N	18
O	4
P	15
Q	10
R	6
S	7
T	5



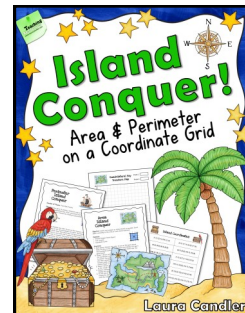
Quadrilateral Bay Treasure Map

Island Locations Answer Key

20																			
19	G					S											R		
18																			
17					E			M		P									
16																		L	
15																			
14	J																		
13					Q														
12																			
11	F								T										
10																			
9									K			I						N	
8																			
7						D													
6																			
5					C					O		H							
4	A																		
3																			
2																			
1					B														
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17		

Common Core Aligned Math Standards

Island Conquer is aligned with the 3rd and 5th grade standards below. However, because coordinate graphing is not formally taught until 5th grade, if you use the game with 3rd graders, you have to teach your students how to plot points on a coordinate grid.



Grade 3

Geometric measurement: understand concepts of area and relate area to multiplication and to addition.

3.MD.5. Recognize area as an attribute of plane figures and understand concepts of area measurement.

- A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area.
- A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.

3.MD.6. Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).

3.MD.7. Relate area to the operations of multiplication and addition.

- 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.
- 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.
- Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.

Geometric measurement: recognize perimeter.

3.MD.D.8 –Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.

Grade 5

Graph points on the coordinate plane to solve real-world and mathematical problems.

5.GA.1 – Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis.

5.GA.2 – Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

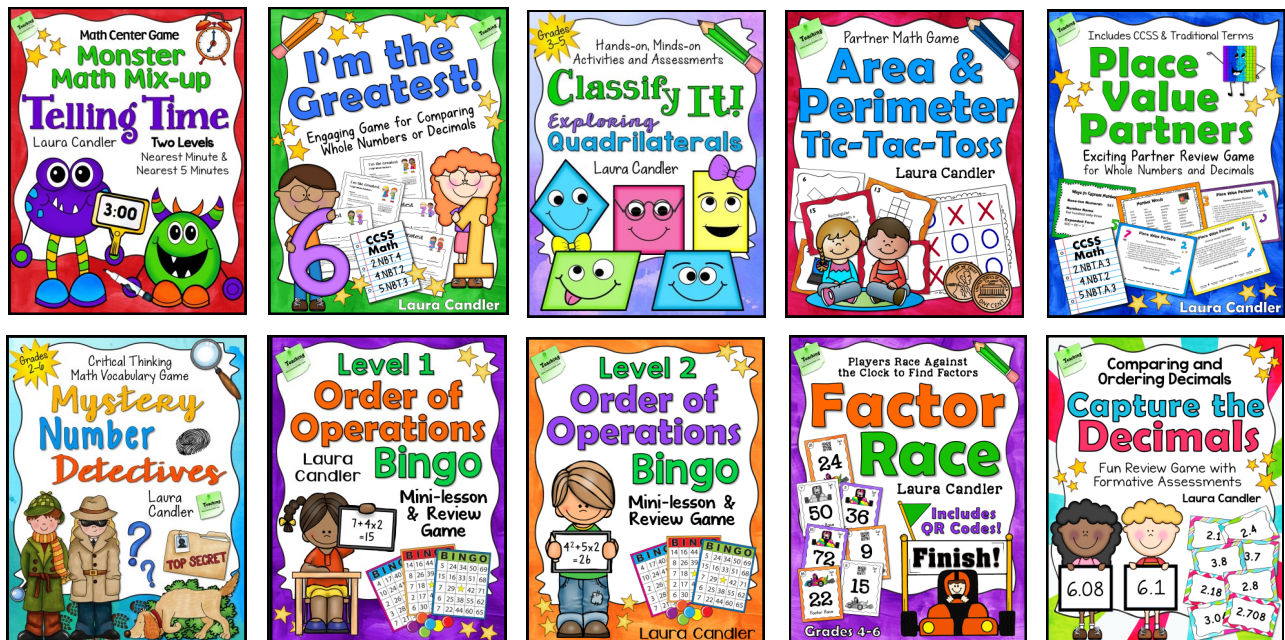
Pirate's Luck Math Game - Digital and Printable

Fun game for practicing addition and multiplication facts!

[Click here to preview Pirate's Luck on TpT!](#)



More Printable Math Games from Laura Candler



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