WHERE DOES IT LIVE?

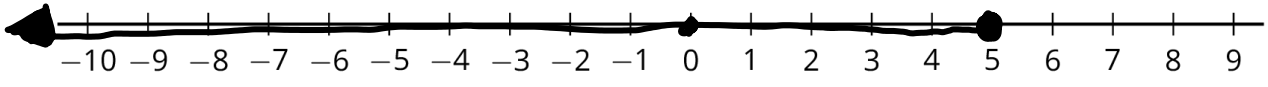
LEARNING GOAL

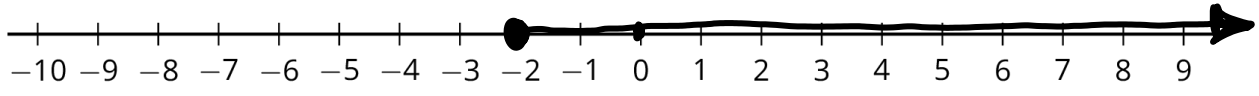
1. I can use inequalities to describe where a species lives.

REVIEW

Remember that a compound inequality is two inequalities that are joined together using the word "and" or "or".

NUMBER LINE





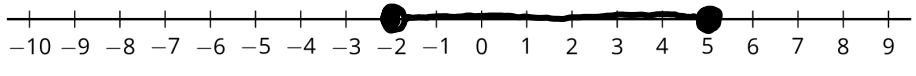
INEQUALITY

$x \leq 5$

$x \geq -2$

Question: How can you describe the numbers that are solutions to **both** inequalities?

USE A NUMBER LINE



WRITE A COMPOUND INEQUALITY

$x \geq -2$ and $x \leq 5$

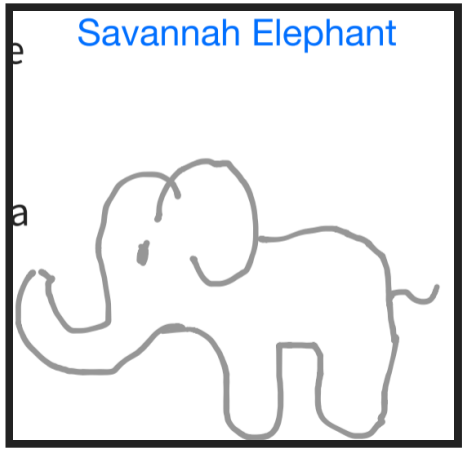
$-2 \leq x \leq 5$

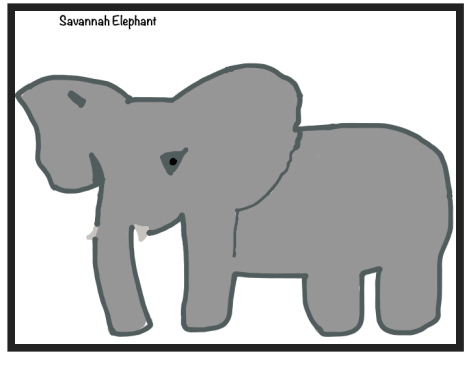
SPECIES CHOSEN

- Savannah elephant
- Muskellunge
- White-tailed deer
- Ocelot
- Domestic cat
- Amur leopard
- Amur tiger
- Great white shark
- African giraffe
- Snow leopard
- Hawksbill sea turtle
- Pale throat sloth
- Wombat
- African rhinoceros
- Lion
- Polar bear
- Green monkey
- Kangaroo
- American flamingo
- Pineapple?
- Trash panda (Raccoon?)
- Chimpanzee
- African grey parrot
- Fox squirrel
- African penguin
- Little penguin

SAVANNAH ELEPHANTS

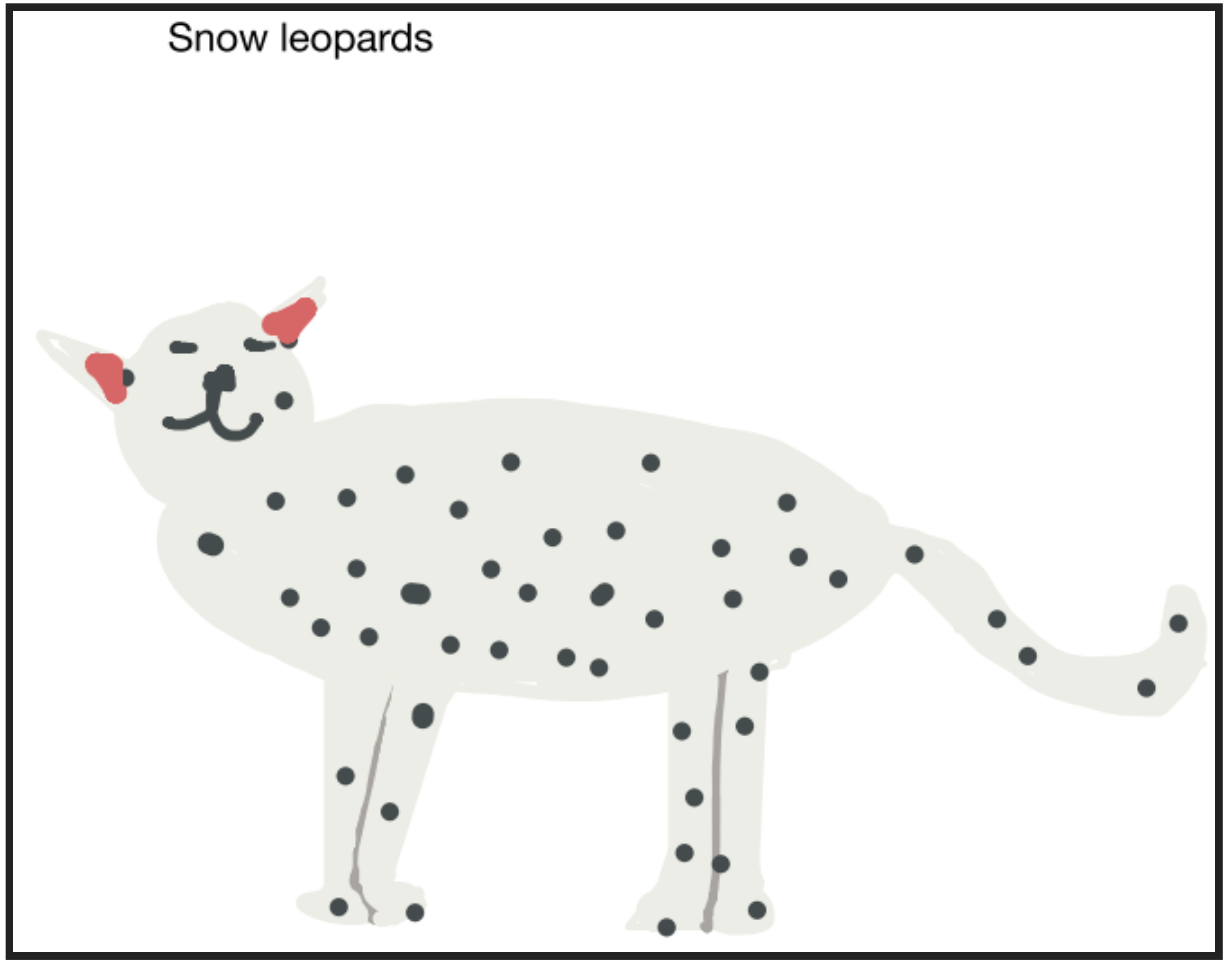
(A popular choice)





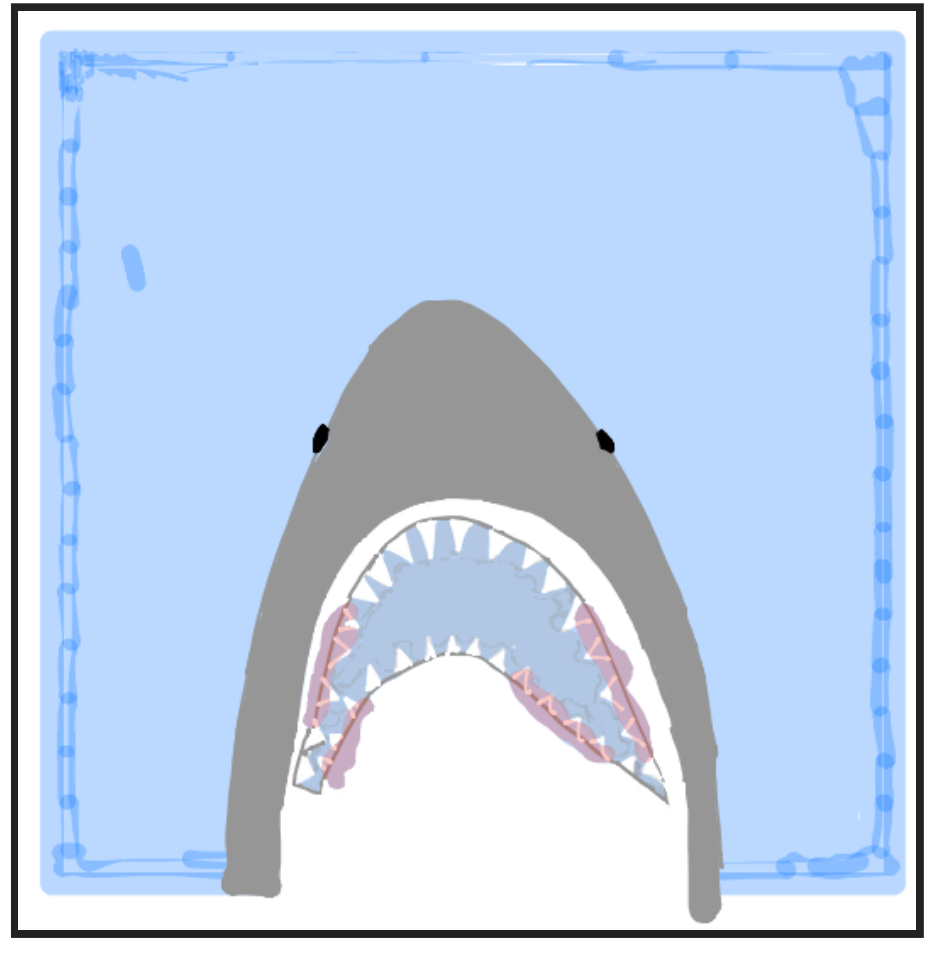
THE AMUR TIGER AND THE SNOW LEOPARD

Two rarely seen species of the tundra.



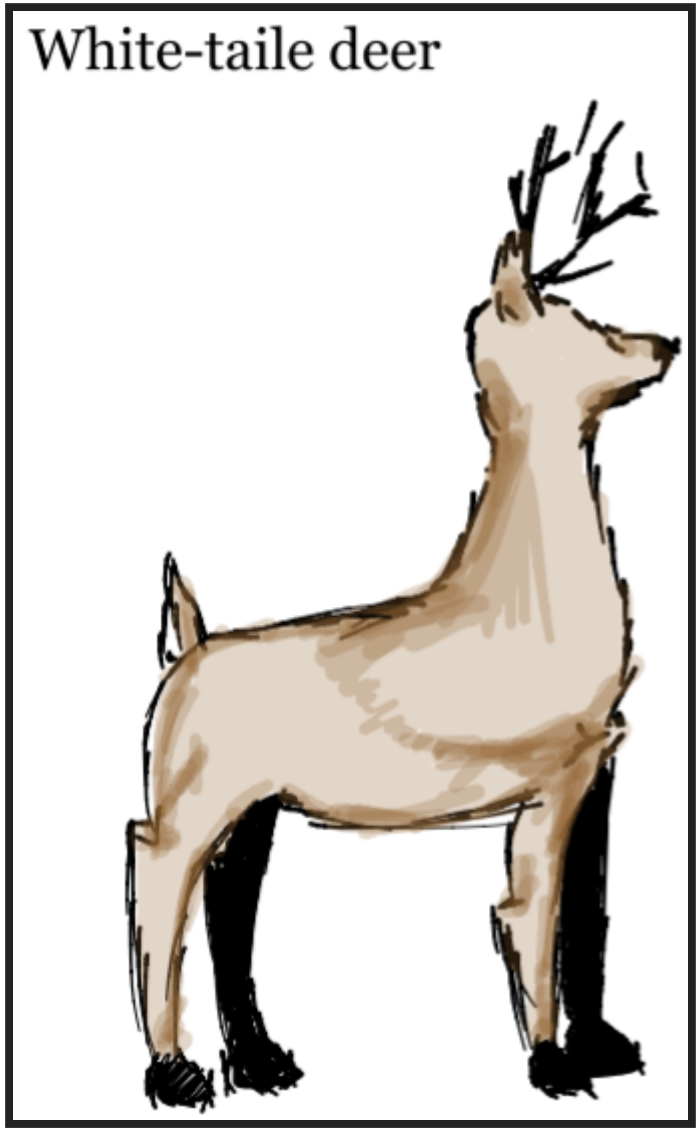
THE SOUTH AFRICAN GIRAFFE AND THE GREAT WHITE SHARK

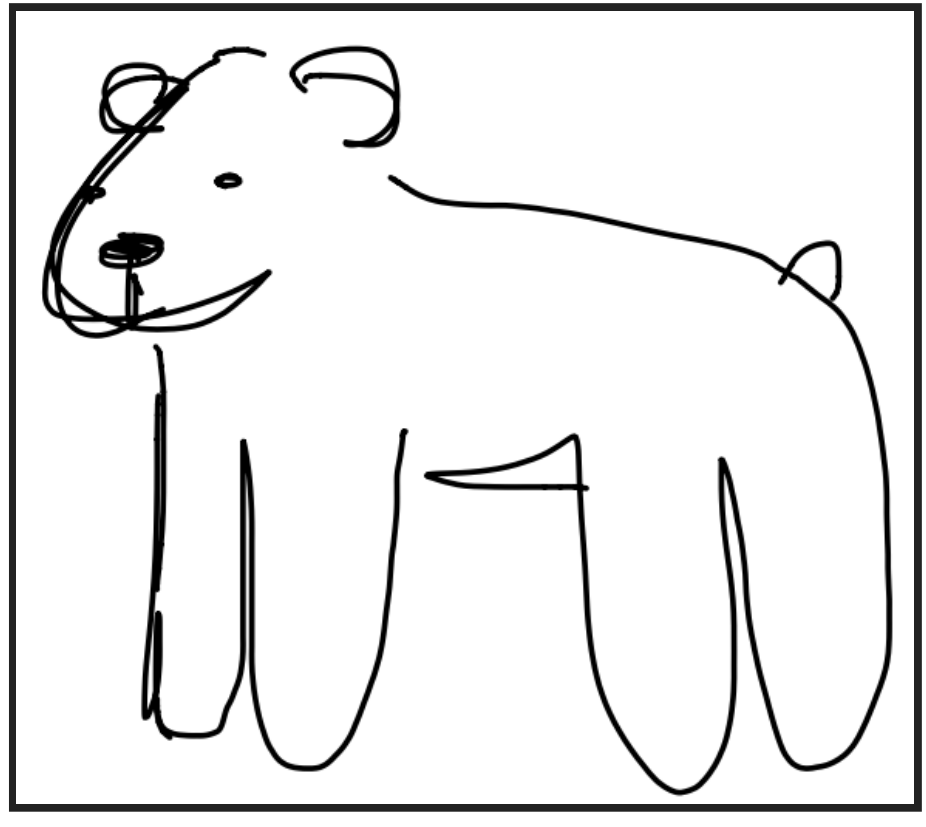
Who could be better friends?




South African Giraffe

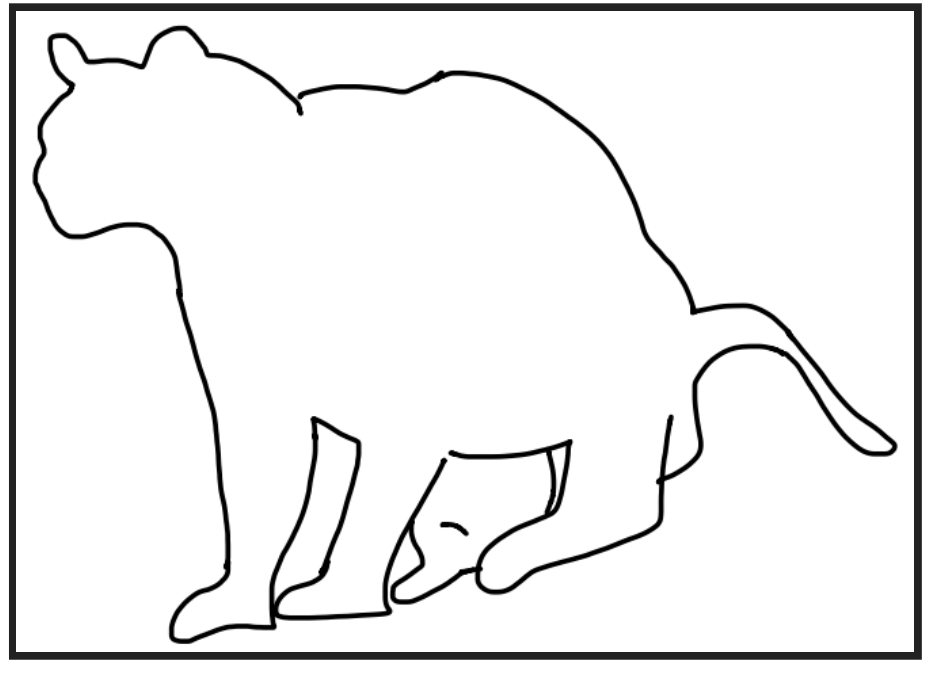
WHITE TAILED DEER AND POLAR BEAR





(CENTRAL) AMERICAN SPECIES

American flamingo

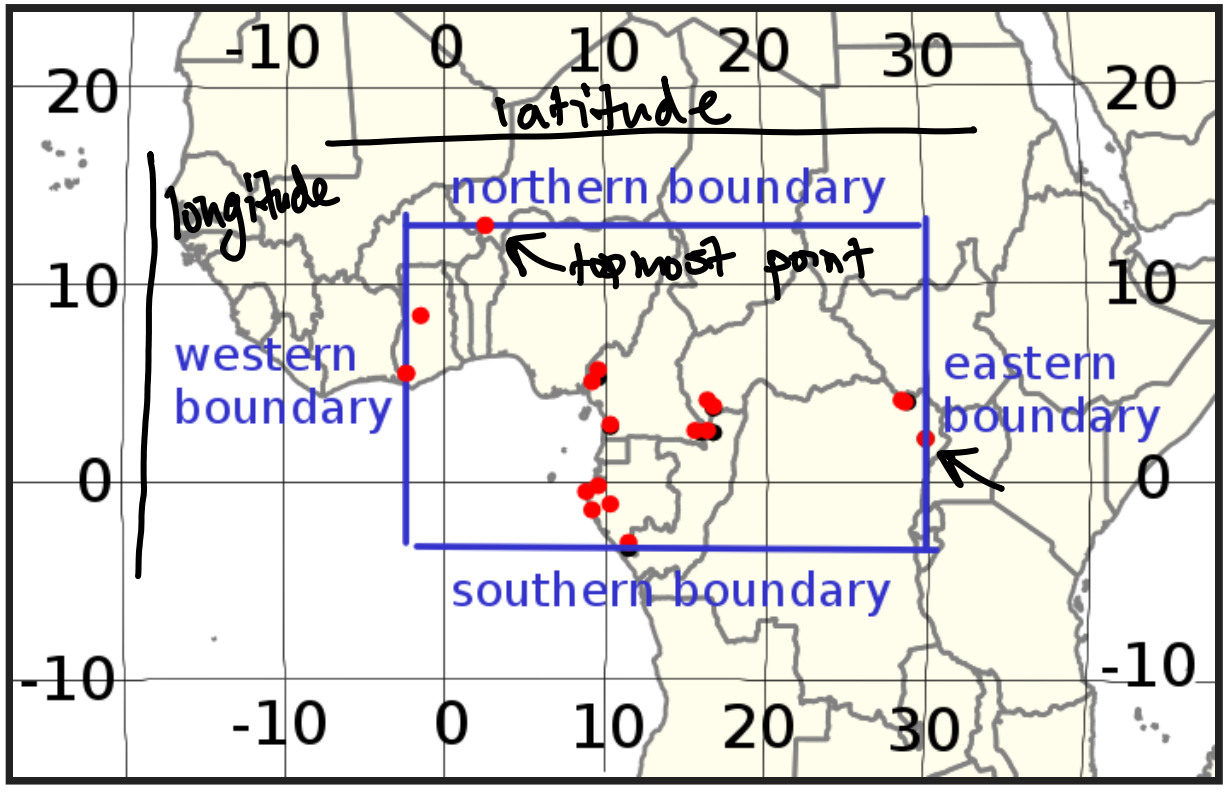


TASK 1

Draw north, south, east, and west boundaries around where your species lives.

THINGS TO REMEMBER:

1. North and south boundaries will lie along lines of latitude (horizontal lines)
2. East and west boundaries will lie along lines of longitude (vertical lines).
3. Each line must pass through the top, bottom, leftmost, or rightmost point.



TASK 1

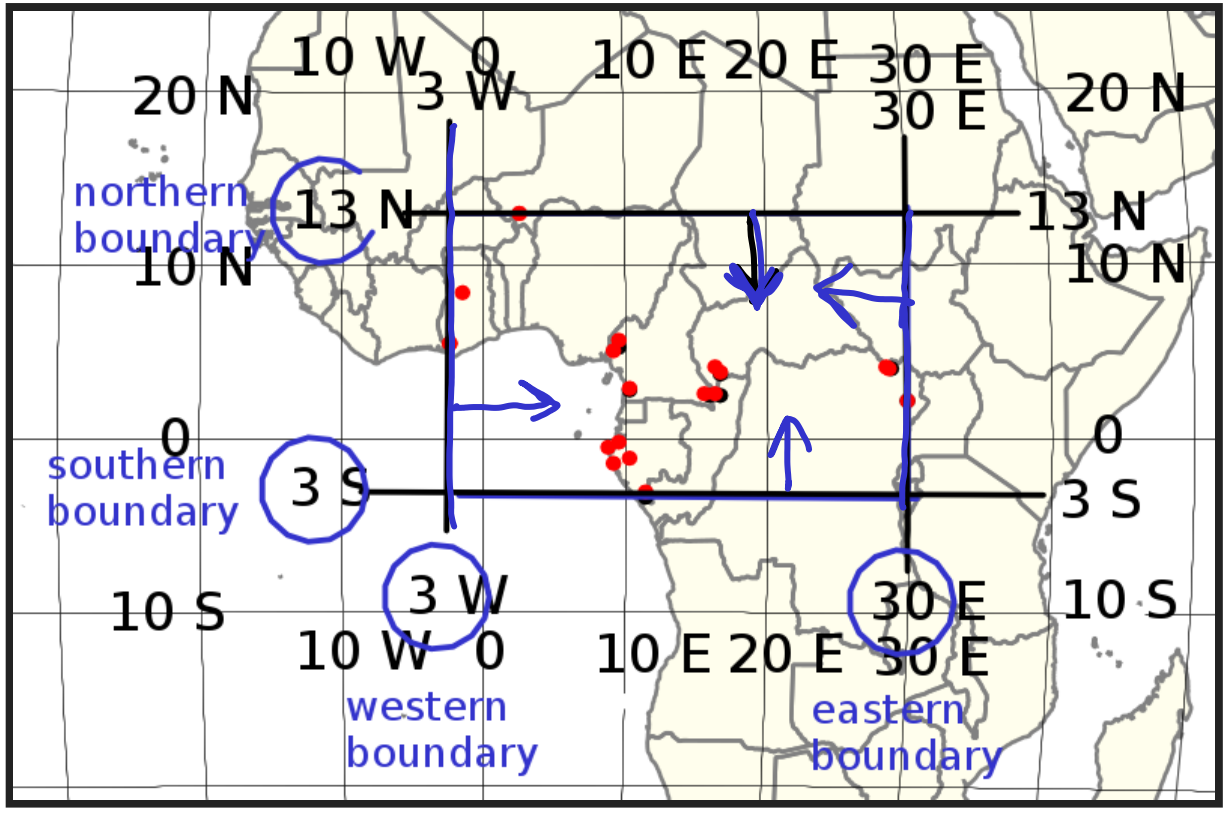
Draw north, south, east, and west boundaries around where your species lives

Open your map from task 3 yesterday, copy it here, and draw the boundaries.

TASK 2

Write a sentence for each boundary of your species' range. Use the sentence form given.

Sentence form: The range of my species is *north/south/east/west* of _____(° N/S/E/W$) (degree of *latitude/longitude*).



Sentences

1. The range of my species is *south* of 13 ° N.
2. The range of my species is *north* of 3 ° S.
3. The range of my species is *west* of 30 ° E.
4. The range of my species is *east* of 3 ° W.

TASK 2

Write a sentence for each boundary of your species' range.

Sentence form: The range of my species is *north/south/east/west* of _____(° N/S/E/W$) (degree of *latitude/longitude*).

Sentences

1. The range of my species is *south* of _____ ° ____.
2. The range of my species is *north* of _____ ° ____.
3. The range of my species is *west* of _____ ° ____.
4. The range of my species is *east* of _____ ° ____.

TASK 3

Translate each of your sentences from task 2 into an inequality.

SENTENCES FROM TASK 2

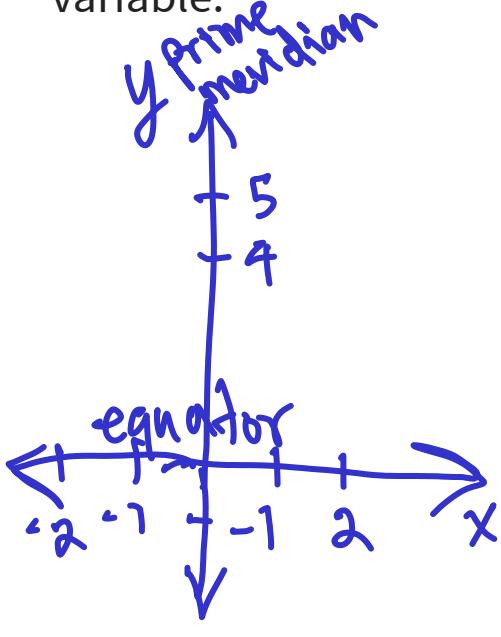
1. The range of my species is *south* of 13 ° N.
2. The range of my species is *north* of 3 (-3) ° S.
3. The range of my species is *west* of 30 ° E.
4. The range of my species is *east* of 3 (-3) ° W.

INEQUALITIES

1. Inequality for northern boundary: $y < 13$
2. Inequality for southern boundary: $y > -3$
3. Inequality for eastern boundary: $x < 30$
4. Inequality for western boundary: $x > -3$

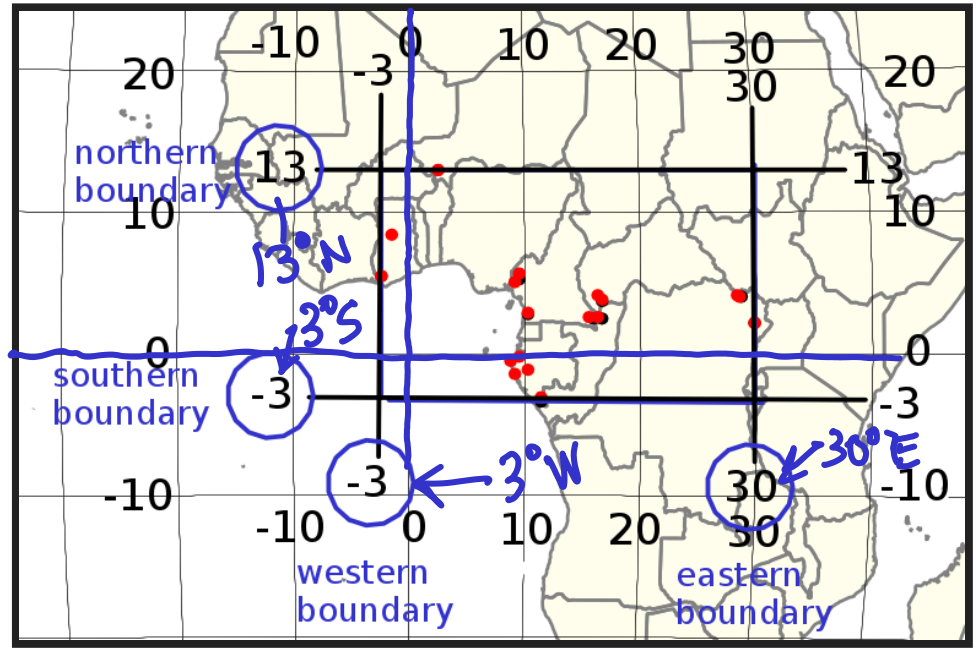
TASK 3: THINGS TO REMEMBER

1. If your sentence is about latitude, use y as your variable.
2. If your sentence is about longitude, use x as your variable.
3. Use positive numbers for latitudes north of the equator and negative numbers for latitudes south of the equator.
4. Use positive numbers for longitudes east of the prime meridian and negative numbers for longitudes west of the prime meridian.



$y < 13$

$y > -3$



$x > -3$ $x < 30$

TASK 3

Translate each of your sentences from task 2 into an inequality.

SENTENCES FROM TASK 2

1. The range of my species is *south* of _____ ° ____.
2. The range of my species is *north* of _____ ° ____.
3. The range of my species is *west* of _____ ° ____.
4. The range of my species is *east* of _____ ° ____.

INEQUALITIES

1. Inequality for northern boundary:
2. Inequality for southern boundary:
3. Inequality for eastern boundary:
4. Inequality for western boundary:

TASK 4

Combine your inequalities for the longitudes x where your species lives into a **compound inequality**. Do the same for your inequalities for the latitudes y.

INEQUALITIES

1. Inequality for northern boundary:

$y < 13$

Inequality for southern boundary:

$y > -3$

2. Inequality for eastern boundary:

$x < 30$

Inequality for western boundary:

$x > -3$

COMPOUND INEQUALITIES

1. Compound inequality for the range of latitudes:

$y > -3$ and $y < 13$

$-3 < y < 13$

2. Compound inequality for the range of longitudes:

$x > -3$ and $x < 30$

$-3 < x < 30$

TASK 4

Combine your inequalities for the longitudes x where your species lives into a **compound inequality**. Do the same for your inequalities for the latitudes y.

INEQUALITIES

1. Inequality for northern boundary:

   Inequality for southern boundary:

2. Inequality for eastern boundary:

   Inequality for western boundary:

COMPOUND INEQUALITIES

1. Compound inequality for the range of latitudes:

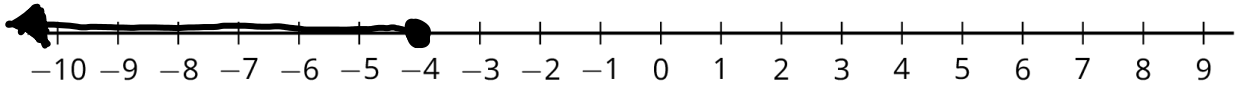
2. Compound inequality for the range of longitudes:

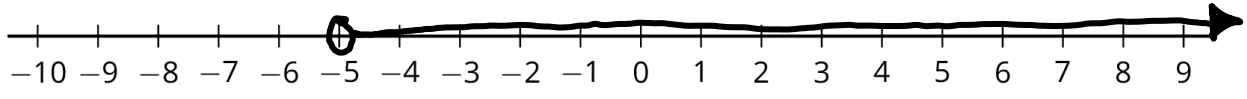
TASK 5

Write an inequality for each number line. Then use a number line and a compound inequality to describe the numbers that are solutions to **both** inequalities.

NUMBER LINE

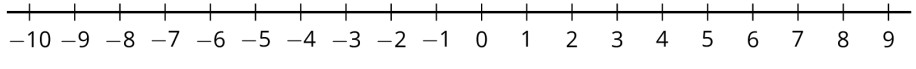
INEQUALITY





Describe the numbers that are solutions to **both** inequalities?

USE A NUMBER LINE



WRITE A COMPOUND INEQUALITY