Day 12

1. Opener

a) Draw an equilateral rectangle. What is another name for this?

What is the 2007th term of each sequence?

b) 3, 10, 17, 24, ... ,

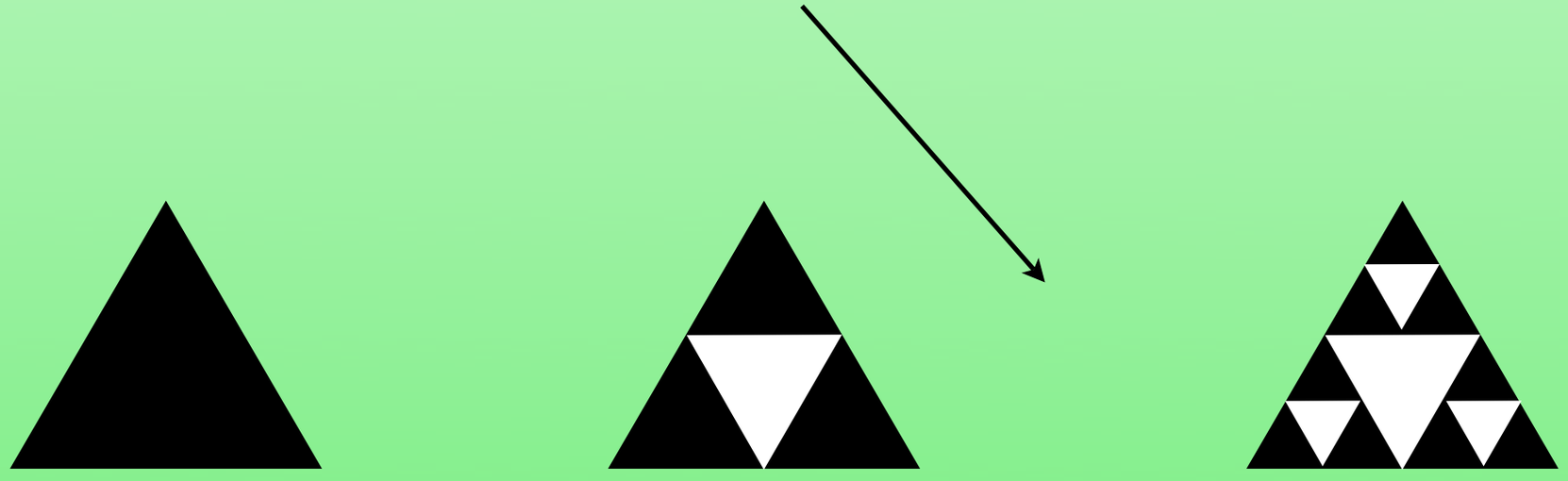
c) 5, 9, 13, 17, 21, ... ,

d) 10, 3, -4, -11, -18, ... ,

e) 12, 15.5, 19, 22.5, 25, ... ,

f) How many black triangles will there be in the 6th shape of this sequence?

g) What is the highest-paid mascot? How much is he/she/it paid?



$150,000, the Phoenix Suns Gorilla

2. Pass Back Tests

3. Classwork

The Handshake Problem:

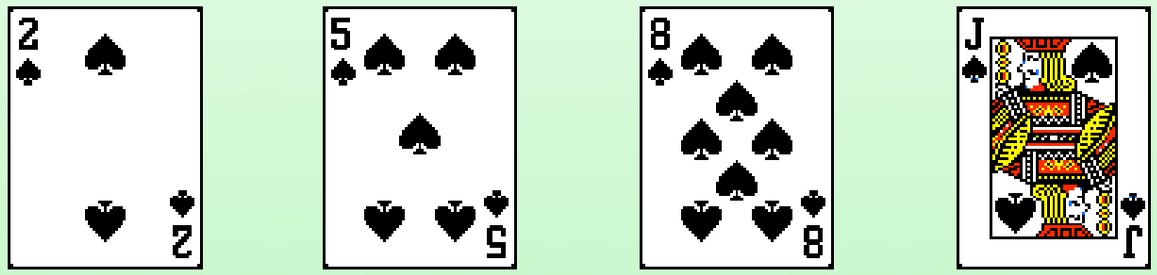
pg. 115 // #1 - 5, 10

Ask for guesses.

Day 13

1. Opener

a) What's the next term in this sequence? What is the 15th term?



b) How many degrees make up each arc of a 16-slice pizza?

What is the 2007th term of the following sequences:

c) 2, 10, 18, 26, 34, 42, 50, 58, 66, 74, 82, 90, 98, 116, ... ,

d) 7, 3, -1, -5, -9, -13, -17, -21, -24, -28, -32, -36, -40, ... ,

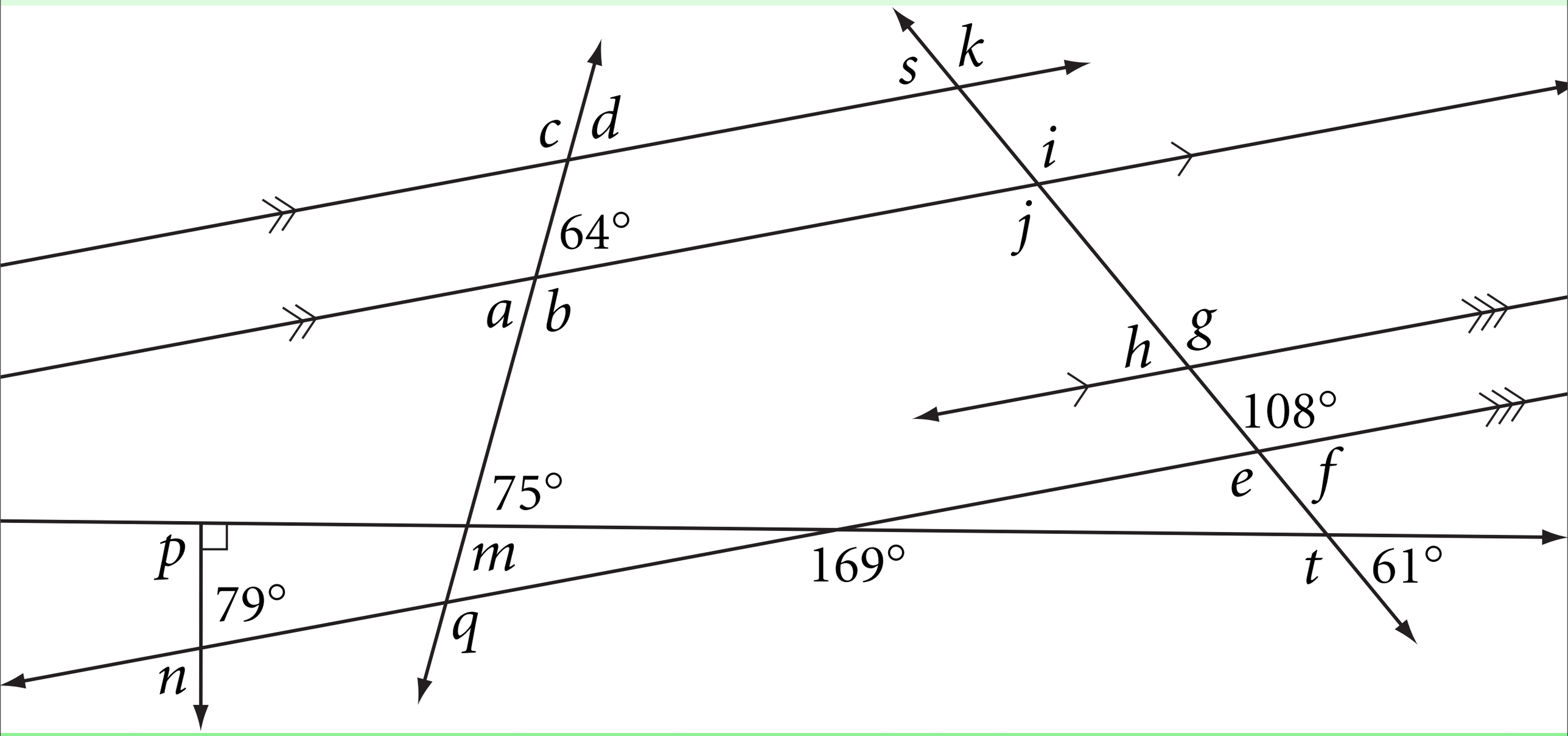
e) What is the sum of the first 2007 terms of the following sequence: 1, 3, 5, 1, 3, 5, ... ,

f) Serious Extra Credit: What will the 2007th card be in a)

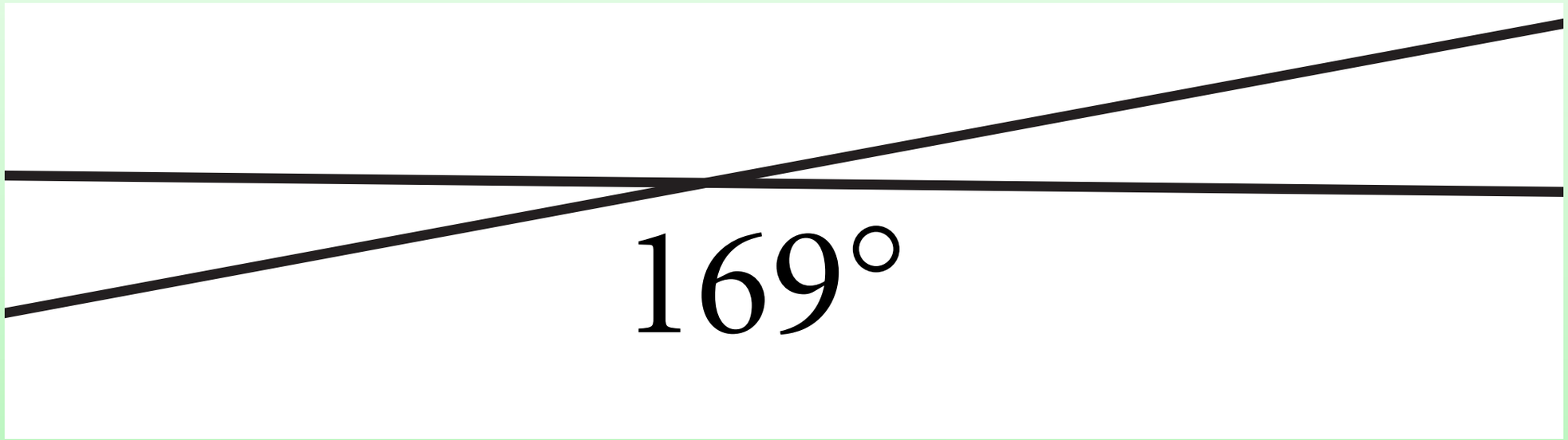
g) What is the GWR for Most T-Shirts Worn At The Same Time? How many? How long did it take to put them on?

4 hours, 155 t-shirts. 100 extra pounds

2. Angle Relationships



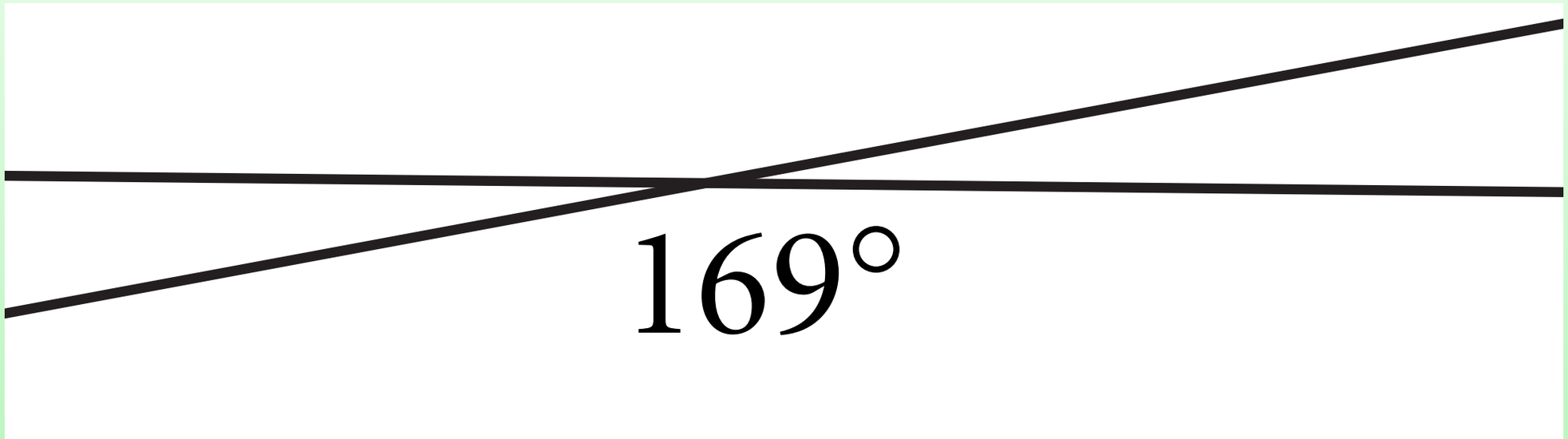
2. Angle Relationships



Conjecture 2: Vertical Angles Conjecture

If two angles form vertical angles they are [redacted]

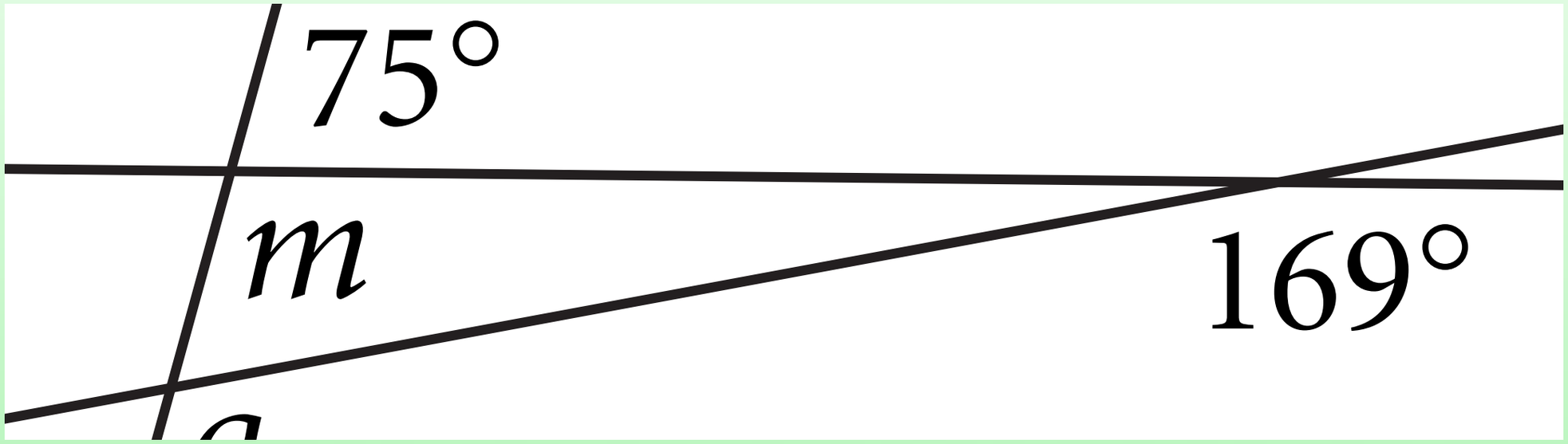
2. Angle Relationships



Conjecture 3: Linear Pair Conjecture

If two angles form a linear pair then they are [redacted]

2. Angle Relationships



Conjecture 4: Triangle Sum Conjecture

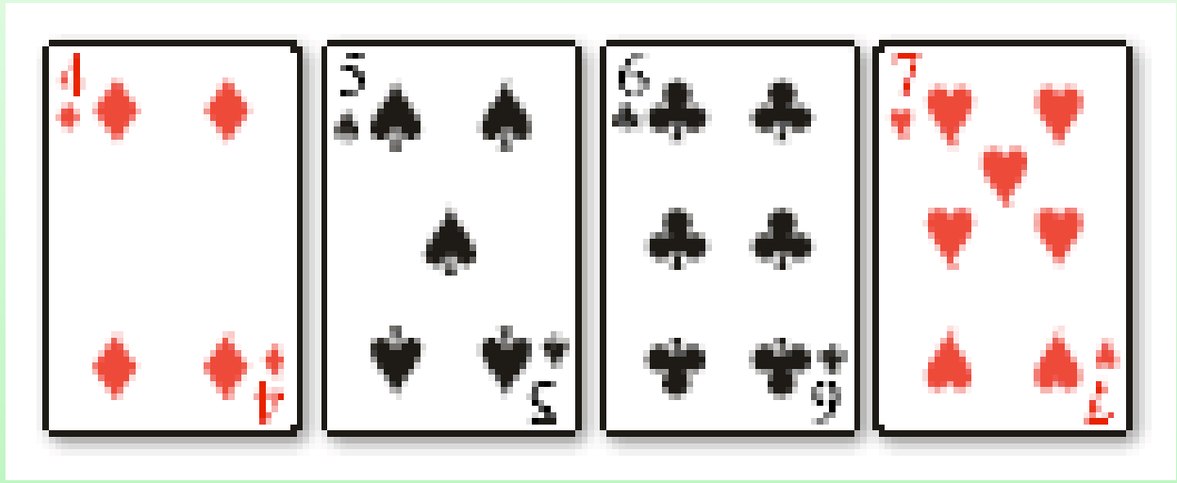
The sum of the angles of a triangle is [redacted].

3. Classwork

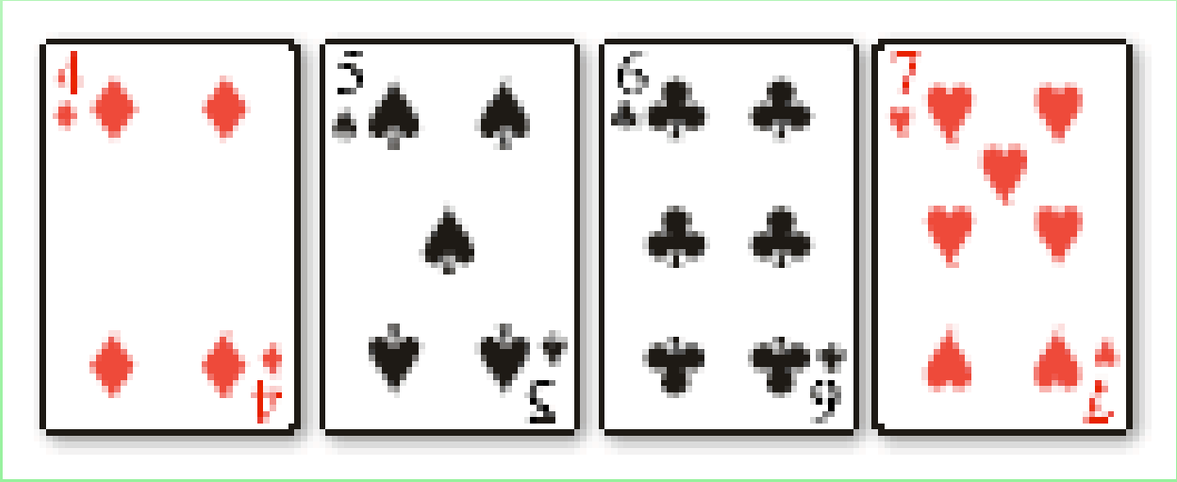
pg. 122 // #1 - 6, 18

4. Homework Review

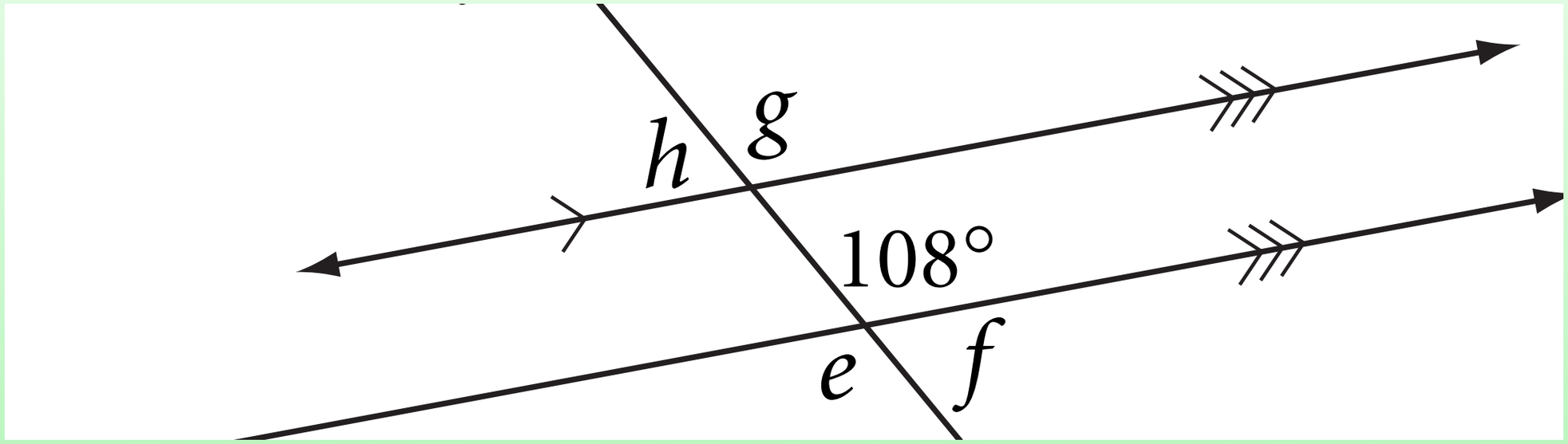
before turn



after turn



5. Angle Relationships



Conjecture 5: Parallel Line Conjecture

If two parallel lines are cut by a transversal then:

alternate interior angles are [redacted]
alternate exterior angles are [redacted] and
corresponding angles are [redacted]

5. Angle Relationships

How many angles are there?

8

Corresponding angles.

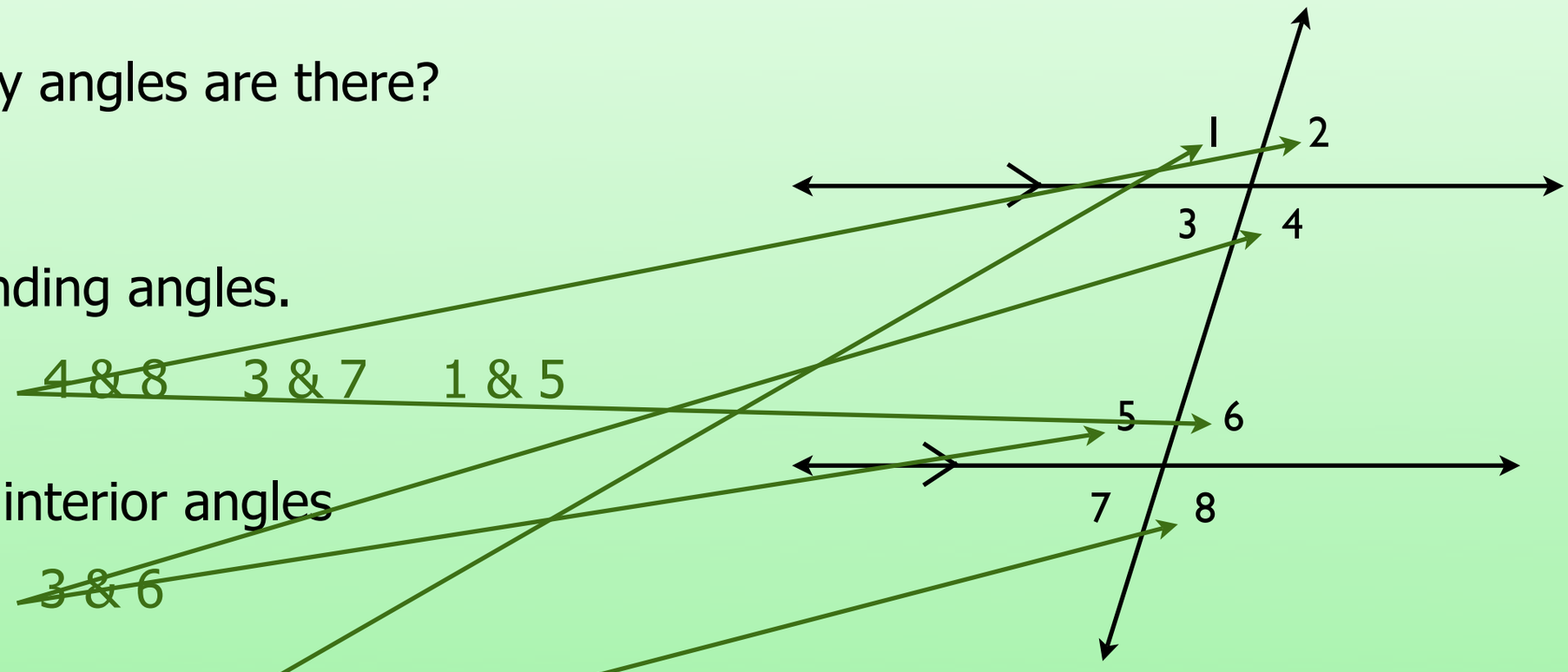
2 & 6 4 & 8 3 & 7 1 & 5

Alternate interior angles

4 & 5 3 & 6

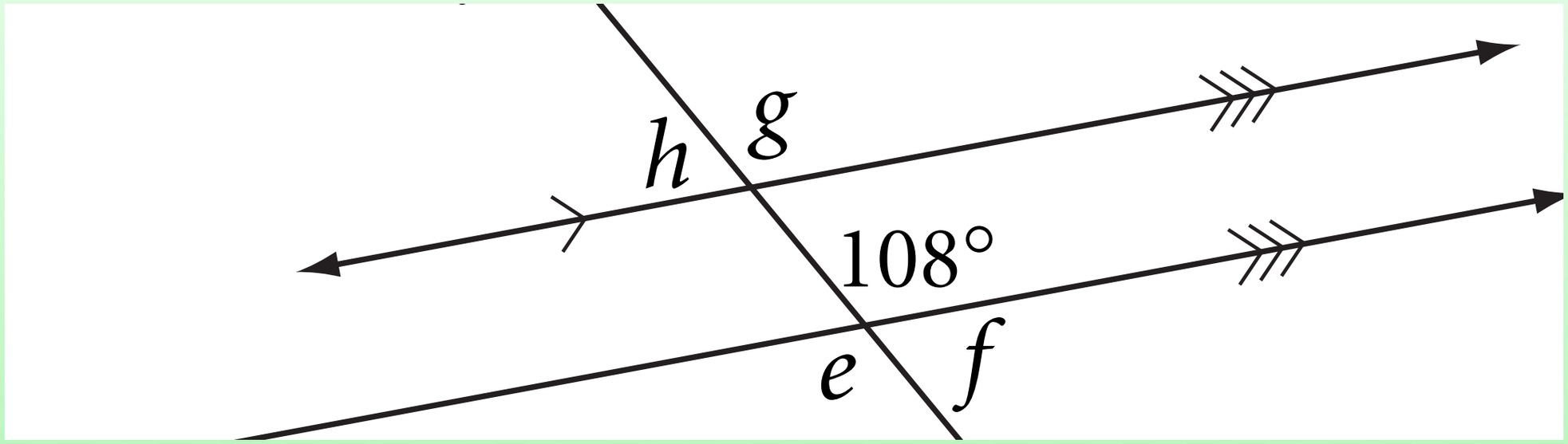
Alternate exterior angles

1 & 8 2 & 7



Ask them for the other angle pairs

5. Angle Relationships



Conjecture 5: Parallel Line Conjecture

If two parallel lines are cut by a transversal then:

alternate interior angles are [redacted]
alternate exterior angles are [redacted] and
corresponding angles are [redacted]

6. Classwork

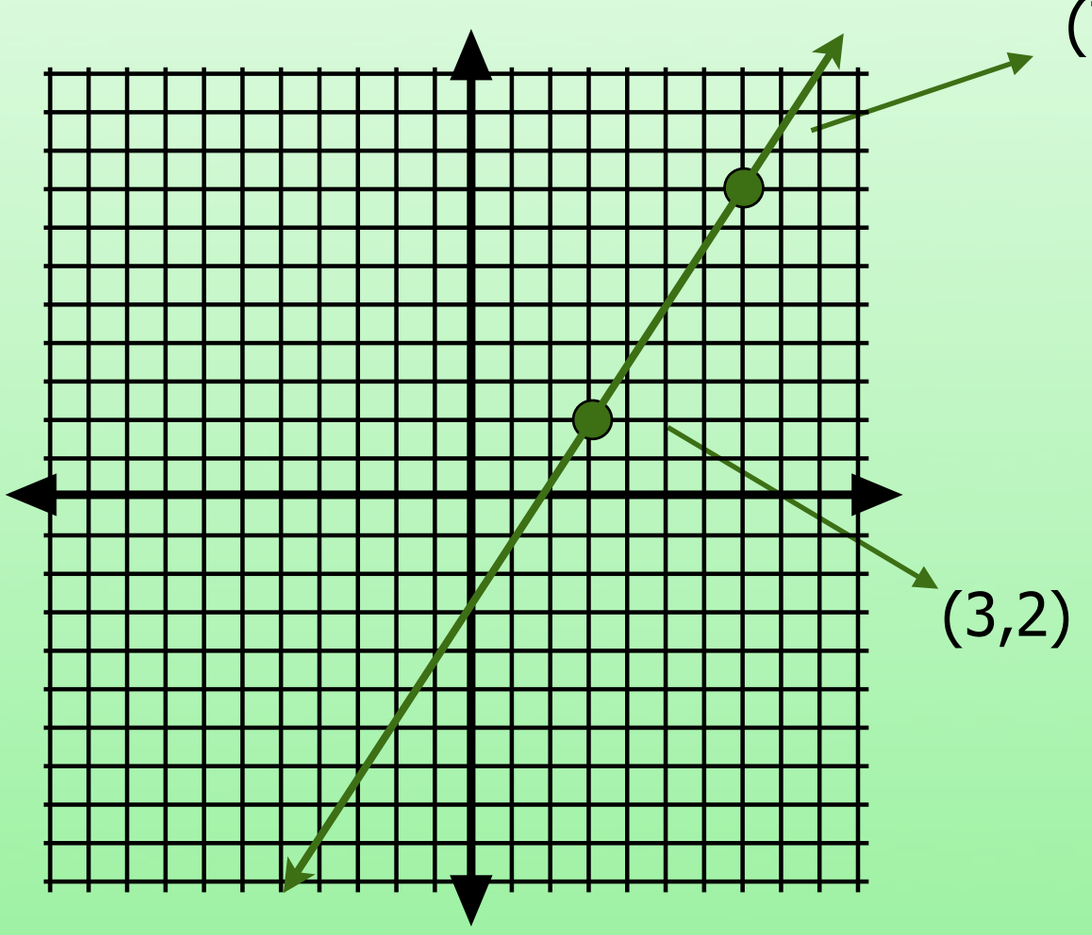
pg. 140 // #26
pg. 129 // #1 - 7, 9, 10, 15, 21,

7. Break

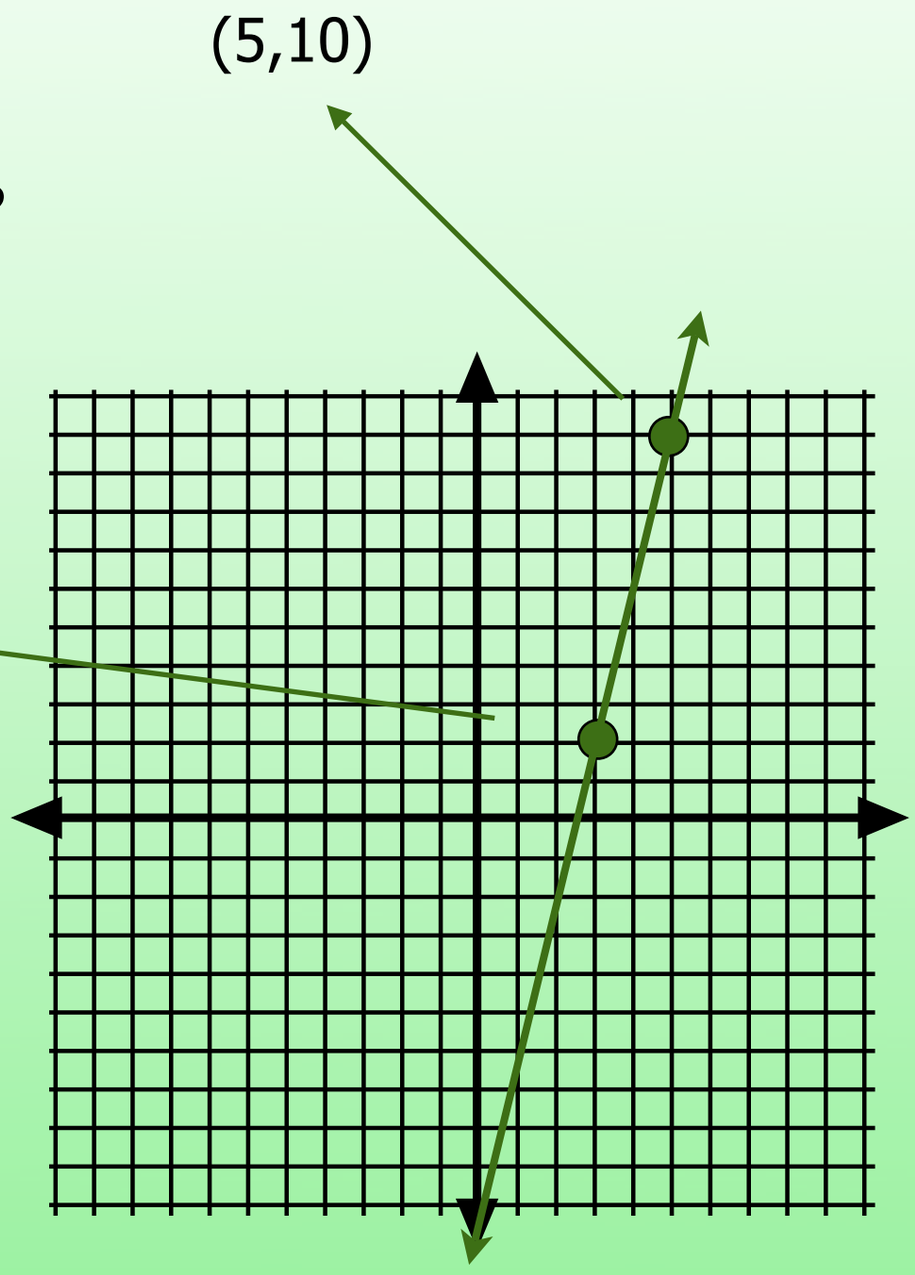
8. Show and Tell

2. Algebra Review - Slope

How do you describe the "tilt" of a line?



$$\frac{8-2}{7-3} = \frac{6}{4} = \frac{3}{2} = 1.5$$



$$\frac{10-2}{5-3} = \frac{8}{2} = 4$$

10. Classwork

pg. 134 // #1 - 6, 9

11. Homework

Quadrilateral Toolkit OR Midpoint Formula

Homework depends on which you need.

Find the midpoint between:

1. (4, 8) and (2, 10) (3, 9)
2. (-3, 7) and (5, -2) (1, 2.5)
3. (1, 0) and (-5, 4) (-2, 2)
4. (-2, -8) and (8, 10) (3, 1)
5. (0, 0) and (10, 0) (5, 0)
6. (2, 1) and (10, 7) (6, 4)
7. (-1, 7) and (3, 9) (1, 8)
8. (9, 9) and (7, 5) (8, 7)
9. (11, 2) and (0, 4) (5.5, 3)
10. (1, -7) and (2, 9) (1.5, 1)

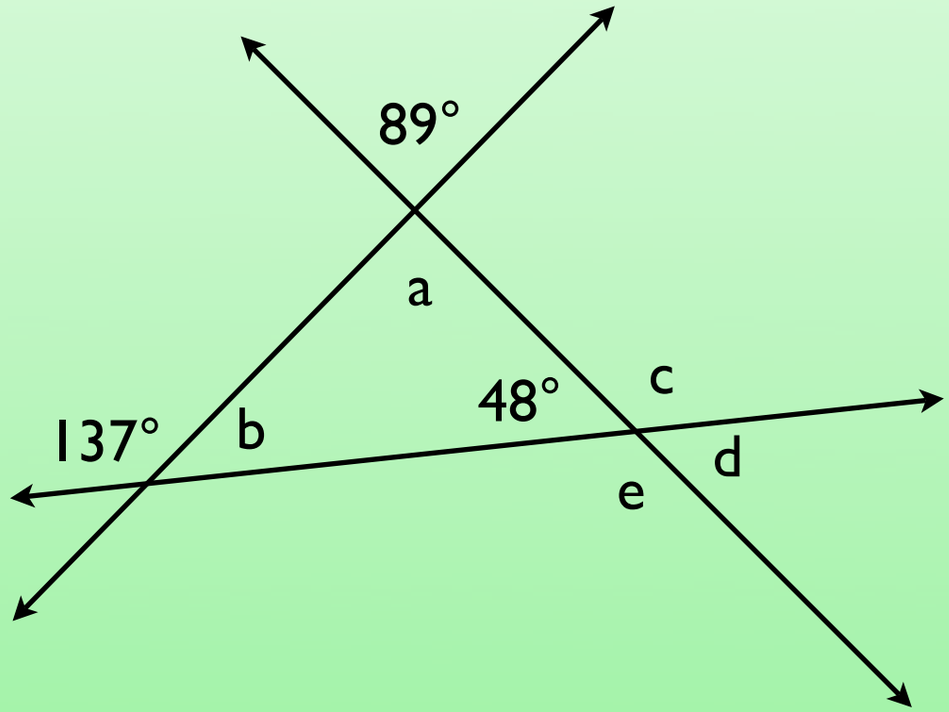
this was for the class that started late

Day 14

1. Opener

a) Draw a rhombus, a trapezoid, a rectangle, and a parallelogram.

b) Calculate the measure of all unknown angles in the figure. What conjectures did you use?



What is the 2006th term of the following sequences:

c) -3, 3, 9, 15, 21, ... ,

d) 100, 91, 82, ... ,

What are the next two terms of the following sequences:

e) 2, 7, 9, 16, 25, ... ,

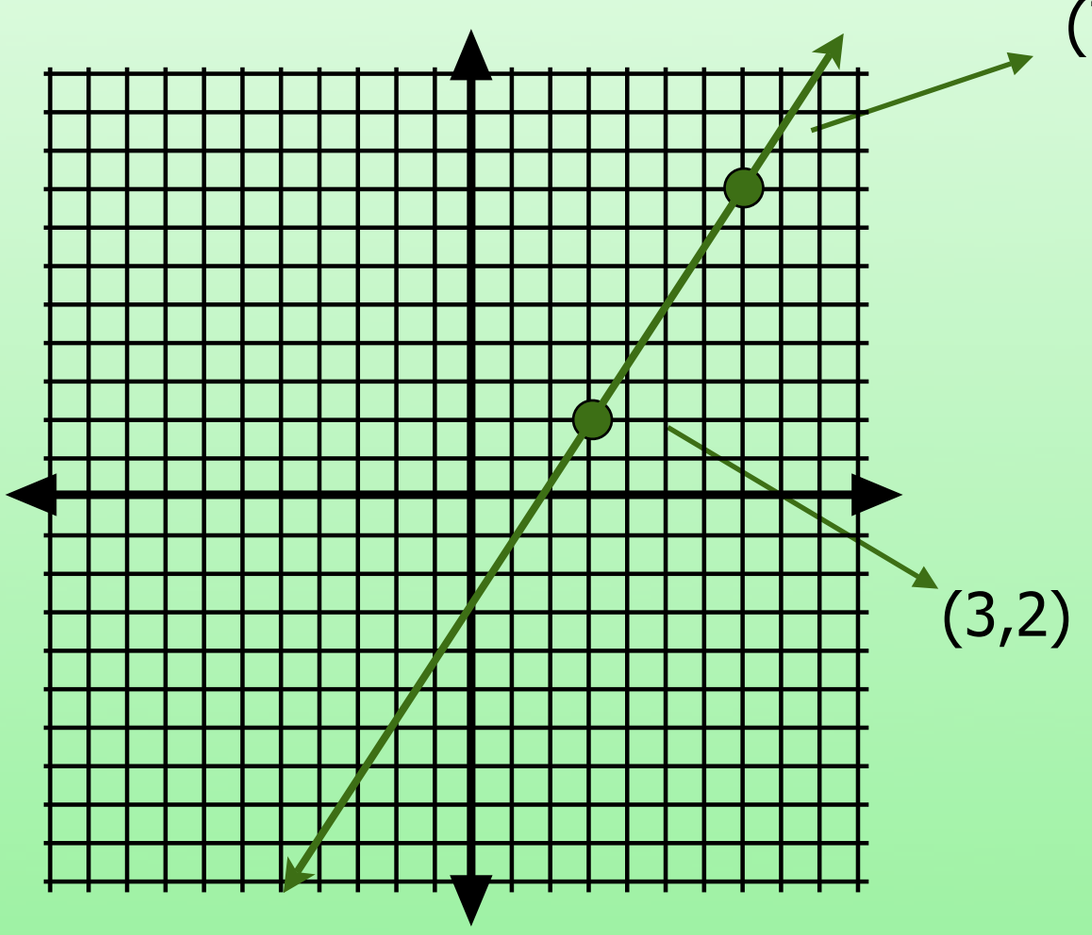
f) T, W, T, F, S, ... ,

g) 162 Japanese died of Karoshi in 2002. What is it?

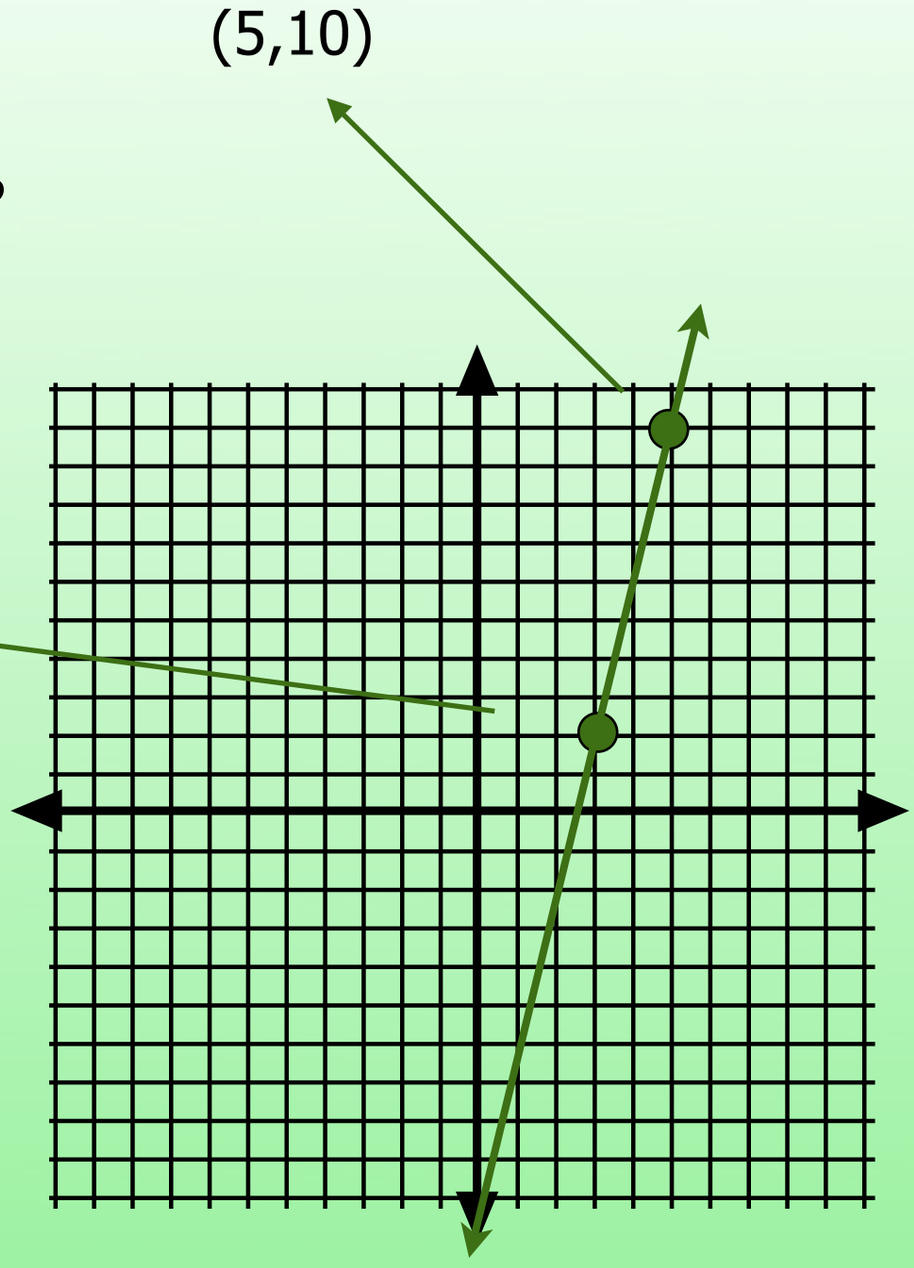
162. What is Karoshi? Overwork. How do you know you are working too too much?

2. Algebra Review - Slope

How do you describe the "tilt" of a line?



$$\frac{8-2}{7-3} = \frac{6}{4} = \frac{3}{2} = 1.5$$



$$\frac{10-2}{5-3} = \frac{8}{2} = 4$$

3. Classwork

pg. 134 // #1 - 10

4. Break

5. Show and Tell

6. Notes - Two Types of Reasoning

<u>Deductive</u>

Start with lots of rules.

Make another rule.

<u>Inductive</u>

Establish a rule.

Start with lots of observations.

6. Notes - Two Types of Reasoning

Deductive

Gravity makes things fall downwards.
Things that fall from a great height get hurt.

If I jump off this building, I will fall downwards.

Inductive

Things I throw off the roof fall down.

I threw a ball off the roof and it fell down.
I threw a rock off the roof and it fell down.
I threw a cat off the roof and it fell down.

6. Notes - Two Types of Reasoning

<u>Deductive</u>

All tall people are handsome.
Handsome people have lots of friends.

↓

All tall people have lots of friends.

<u>Inductive</u>

All tall people are handsome.

↑

Mr. Meyer is tall and handsome. Tim Robbins is tall and handsome.

6. Vocabulary

<u>Converse</u> - A statement made by switching the hypothesis and conclusion of a conditional statement.

"If a movie stars Rob Schneider, then Mr. Meyer hates it."

hypothesis

conclusion

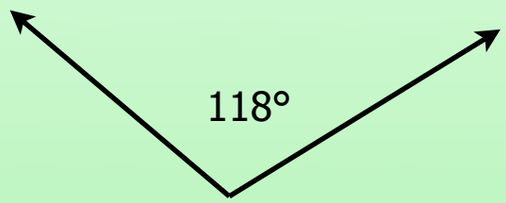
"If Mr. Meyer hates a movie, then it stars Rob Schneider."

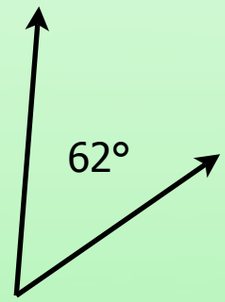
IS THIS CONVERSE TRUE?

6. Discuss With Someone Nearby

1. Is the converse of the Linear Pair Conjecture true?

   "If two angles add up to 180°, then they are a linear pair."

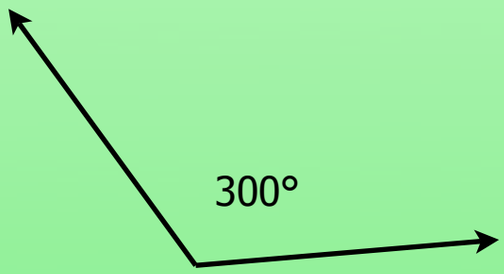


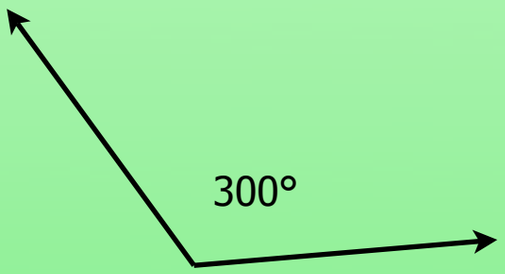


FALSE

2. Is the converse of the Vertical Angles Conjecture true?

   "If two angles are congruent, then they are vertical angles."





FALSE

6. Examples

Ex: If the worker is injured, then the family sues.

"If the family sues, then the worker is injured."

Ex: If the rabbit runs, the hound will leap the fence.

"If the hound leaps the fence, then the rabbit will run."

Ex: If a polygon has five sides, then it is a pentagon.

"If a polygon is a pentagon, then it has five sides."

Ex: "Every member of the academic decathlon team is a good student."

"Bryce is a good student but he's not on the decathlon team."

7. Classwork

pg. 138 // #1, 4 - 7, 10, 11, 12 - 19, 21, 24

8. Review Time

9. Concept Quiz