

NAME:

GEOMETRY UNIT 2

FORMATIVE ASSESSMENT – HOW'RE YOU FEELING?

PART A: TARGET 2A – Understanding Inductive Reasoning

1. Find the next number or object in the pattern. For each, explain how you could find the 100<sup>th</sup> number or object.

a. 3, 9, 15, 21, 27, \_\_\_\_\_ 100<sup>th</sup> number:

b.  100<sup>th</sup> picture:

PART B: TARGET 2B – Understanding Conditional Statements

2. Consider this statement, which we will accept as being true:  
"If the battery is dead, the car will not run."

Which of the following statements mean the same thing? Which must also be true? Write "yes" or "no" in the boxes to indicate your answers.

	Means the same thing as "If the battery is dead, the car will not run."	Must be true.
"If the battery is not dead then the car will run."		
"If the car will not run then the battery is dead."		
"If the car runs then the battery is not dead."		

**PART C: TARGET 2C – Understanding Deductive Reasoning**

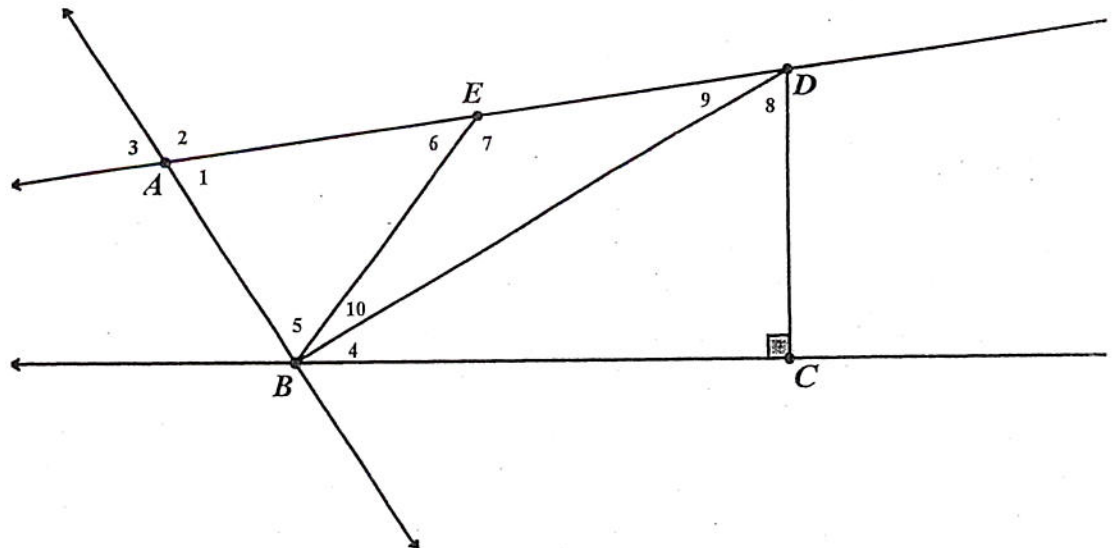
- While playing with some dice one day, James notices that two odd numbers add up to an even number. Wondering if this is always true, he thinks of lots more examples. Since James knows he can't consider every possible pair of numbers, he wonders if there is a different way to explain why two odd numbers must always add up to an even number. Think of a way you could explain it, and write it down here.
- Diana thinks that all parallelograms have two diagonals that are equal to each other. Do you agree? Show or explain why.

**PART D: TARGET 2D – Understand angle and segment relationships**

- Answer each question, using the diagrams at the right and the given information:

$m\angle 1 = 70^\circ$ ,  $m\angle ABD = 90^\circ$ ,  $m\angle 10 = 40^\circ$ ,  $m\angle 4 = 35^\circ$

- Find:
- $m\angle 2 =$  \_\_\_\_\_
- $m\angle 3 =$  \_\_\_\_\_
- $m\angle 6 =$  \_\_\_\_\_
- $m\angle 7 =$  \_\_\_\_\_
- $m\angle 8 =$  \_\_\_\_\_
- $m\angle 9 =$  \_\_\_\_\_



- Using the same diagram as for problem #5, answer the following question:  
E is the midpoint of AD. AD = x cm. Find the length of AE.

7. Here are several words or phrases having to do with angles. Next to each, write whether you have heard the words before, and if you have, describe what you think they mean.

Complementary Angles:

Supplementary Angles:

Vertical Angles:

Linear Pair of Angles:

Adjacent Angles:

**PART E: TARGET - CONNECTIONS – Understanding Mathematical Connection**

8. Joni said:

*I used to think that a rectangle was this:*

*"4-sided polygon with four right angles, and two sides longer than the other two."*

*Now I know that the definition of a rectangle is this:*

*"4-sided polygon with four right angles."*

How does the definition of a rectangle change Joni's thinking about how squares and rectangles are related?