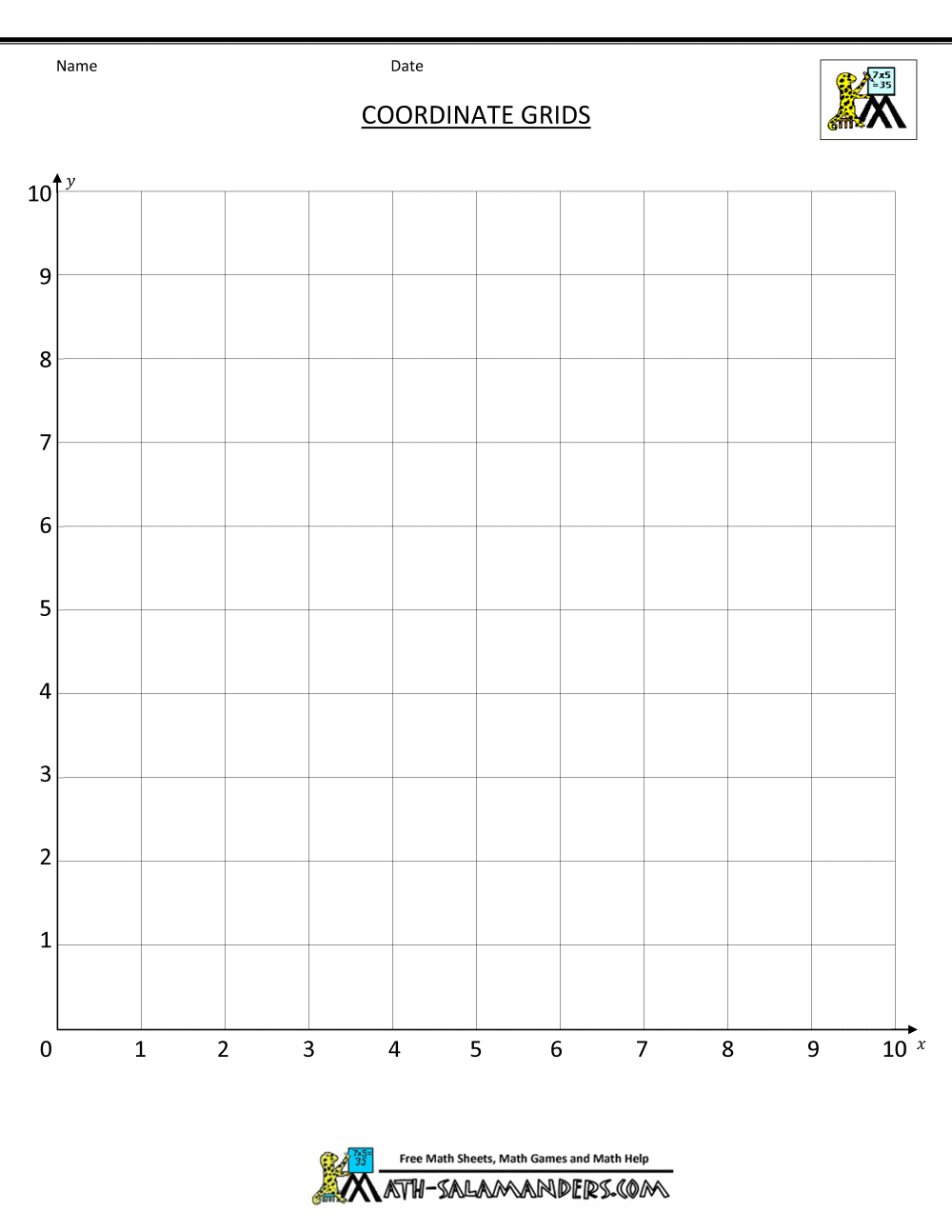
**Notes: MidSegment Theorem Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**WARM UP**

1. Plot where *A*(0, 0) *B*(0, 6) *C*(8, 0)

2. Find the midpoint of *AC.* Label it *E.*

3. Find the midpoint of *AB.* Label it *F.*

4. Draw a segment to connect point *E* and point *F.*

5. Find the length of *EF \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

6. Find the length of *BC \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

7. What do you notice about the 2 lengths?

8. Find the slope of *EF \_\_\_\_\_\_\_\_\_\_*

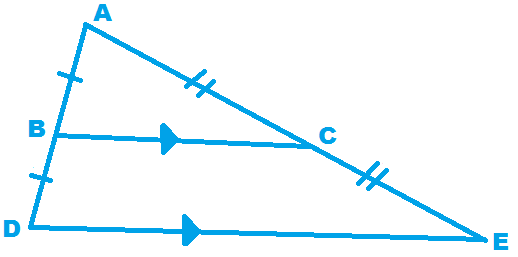
9. Find the slope of *BC \_\_\_\_\_\_\_\_\_\_*

10. What do you notice about the 2 slopes

11. Describe the transformation that happens from to .

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Theorem**

A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ connecting two sides of a triangle is parallel to the third side and is half as long.

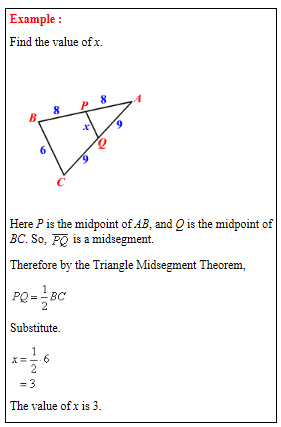
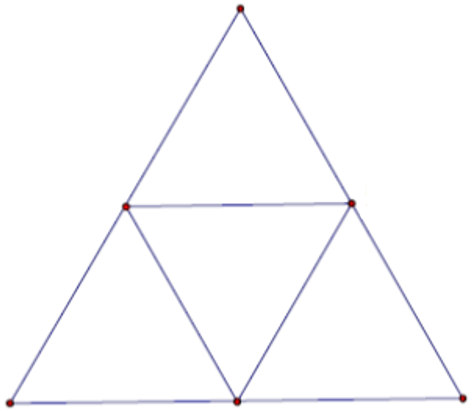


**If *B* is the midpoint of and *C* is the midpoint of**

**Then and**

Example 1: **Solve for**  Example 2: **Use the diagram of where D, E, and F are**

**the midpoints of the sides.**



1. **If then**
2. **If then**
3. **If then**

Understanding Check:

**What are the three key properties or characteristics of a midsegment?**

**1.**

**2.**

**3.**