Geometry Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Worksheet 6.3 Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per: \_\_\_\_\_\_\_\_\_\_

Directions: Are you given enough information to determine whether the quadrilateral is a parallelogram? Explain.

1) 2) 3)

 YES YES YES

4) 5) 6)

60°

120°

12

12

60°

 NO YES YES

Directions: Decide whether each piece of given information alone is sufficient to prove that quadrilateral *ABCD* is a parallelogram. Explain.

A

D

C

B

E

7) E is the midpoint of  and  8) m∠ABC and m∠BCD = 180°

 YES NO

9)  and  10) ∠ABC ≅ ∠ADC, and ∠BAD ≅ ∠BCD

 NO YES

11)  and  12)  and 

 YES YES

13)  and  14) m∠BAD = 110° and m∠BCD = 110°

 NO NO

Directions: Determine what additional information is needed in order to prove that quadrilateral *ABCE* is a parallelogram.

A

B

C

D

E

15)  16) ∠DCA ≅ ∠BAC

 $\overbar{AB}≅\overbar{DC} OR \overbar{AD}∥ \overbar{BC}$ ∠DAC ≅ ∠BCA

17) m∠CDA + m∠DAB = 180° 18) 

 m∠DAB + m∠ABC = 180° $\overbar{AB}∥\overbar{DC} OR \overbar{AD}≅\overbar{BC}$

 m∠ABC + m∠BCD = 180°

 m∠BCD + m∠CDA = 180°

19) 

 $\overbar{AE}≅\overbar{EC}$

Directions: Decide whether the quadrilateral is a parallelogram. Explain.

20) 21) 22) 24)

 YES NO NO YES

24) 25) 26) 27)

 YES NO YES NO