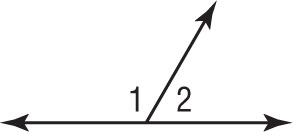
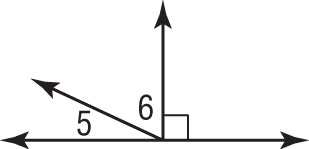
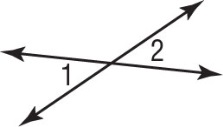
**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Date\_\_\_\_\_\_\_\_\_\_\_\_Block\_\_\_\_\_**

**1-9: Using the theorems learned in class, find the measure of each numbered angle.**

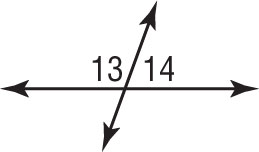
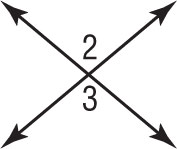
**1.** *m*∠2 = 57 **2.** *m*∠5 = 22 **3.** *m*∠1 = 38

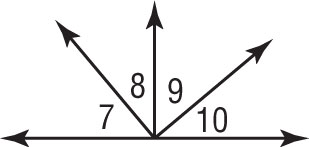


*m*∠1 = \_\_\_\_\_\_\_ *m*∠6 = \_\_\_\_\_\_\_ *m*∠2 = \_\_\_\_\_\_\_

**4.** *m*∠13 = 4*x* + 11, **5.** ∠9 and ∠10 are complementary. **6.** *m*∠2 = 4*x* – 26,

*m*∠14 = 3*x* + 1 ∠7 ≅ ∠9, *m*∠8 = 41 *m*∠3 = 3*x* + 4





*Algebra: Algebra: Algebra:*

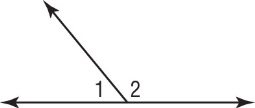
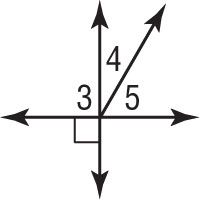
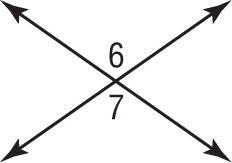
*x* = \_\_\_\_\_\_\_ *m*∠7 = \_\_\_\_\_\_\_ *x* = \_\_\_\_\_\_\_

*m*∠13 = \_\_\_\_\_\_\_ *m*∠9 = \_\_\_\_\_\_\_ *m*∠2 = \_\_\_\_\_\_\_

*m*∠14 = \_\_\_\_\_\_\_ *m*∠10= \_\_\_\_\_\_\_ *m*∠3 = \_\_\_\_\_\_\_

**7.** *m*∠1 = *x* + 10 **8.** *m*∠4 = 2*x* – 5 **9.** *m*∠6 = 7*x* – 24

*m*∠2 = 3*x* + 18 *m*∠5 = 4*x* – 13 *m*∠7 = 5*x* + 14



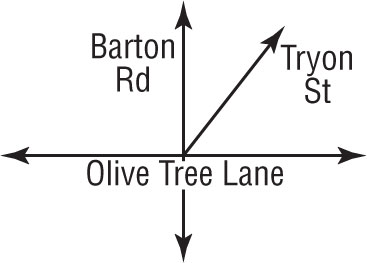
*Algebra: Algebra: Algebra:*

*x* = \_\_\_\_\_\_\_ *x* = \_\_\_\_\_\_\_ *x* = \_\_\_\_\_\_\_

*m*∠1 = \_\_\_\_\_\_\_ *m*∠4 = \_\_\_\_\_\_\_ *m*∠6 = \_\_\_\_\_\_\_

*m*∠2 = \_\_\_\_\_\_\_ *m*∠5= \_\_\_\_\_\_\_ *m*∠7 = \_\_\_\_\_\_\_

**10-11: Refer to the figure to answer the following question.**



**Given: Barton Road and Olive Tree Lane form a right angle at their**

**intersection. Tryon Street forms a 57° angle with Olive Tree Lane.**

**10.** What is the measure of the acute angle Tryon Street forms with Barton Road?

**11.** What theorem, definition, or postulate helped you to answer question #10?

**12-13: Complete the proofs with the correct statements and/or reasons.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **12.**  GEO_CH02-50_01.jpg**Given:** ⊥ ;  ∠1 and ∠3 are  complementary.  **Prove:** ∠2 ≅ ∠3     |  |  | | --- | --- | | **Statements** | **Reasons** | | **a.** ⊥ | **a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | | **b. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | **b.** Definition of ⊥ | | **c.** *m*∠ *ABC* = 90 | **c.** Def. of right angle | | **d.** *m*∠ *ABC* =*m*∠1 + *m*∠2 | **d. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | | **e.** 90 = *m*∠1 + *m*∠2 | **e.** Substitution | | **f.** ∠1 and ∠2 are complementary. | **f. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | | **g. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | **g.** Given | | **h.** ∠2 ≅ ∠3 | **h. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | | **13.**  GEO_CH02-50_02.jpg**Given:** ∠1 and ∠2 form a linear pair.  *m*∠1 + *m*∠3 = 180  **Prove:** ∠2 ≅ ∠3     |  |  | | --- | --- | | **Statements** | **Reasons** | | **a.** ∠1 and ∠2 form   a linear pair. *m*∠1 + *m*∠3 = 180 | **a.** Given | | **b.** *m*∠1 + *m*∠2 = 180 | **b. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | | **c.** *m*∠1 + *m*∠3 = *m*∠1 + *m*∠2  **d.** **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **e.** *m*∠3 = *m*∠2  **f.** *m*∠2 = *m*∠3  **g.** ∠2 ≅ ∠3 | **c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **d.** Subtraction P.O.E.  **e. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **f. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **g. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | |