**PROBLEMS AND SOLUTIONS - LINES AND ANGLES**

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**YOU MUST BE ABLE TO DO THE FOLLOWING PROBLEMS WITHOUT A CALCULATOR!**

**The solutions are listed below the problem set!**

**Problem 1:**

Change $45^{o}14'\ 39''$ (45 degrees and 14 minutes and 39 seconds) to decimal degree form. Round to two decimal places.

**Problem 2:**

Change $34'\ 25''$ (34 minutes and 25 seconds) to decimal degree form. Round to two decimal places.

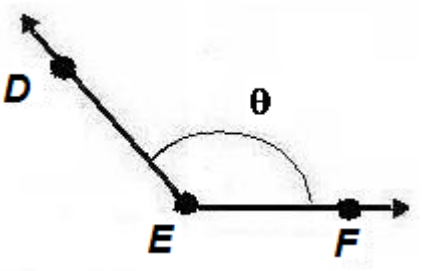
**Example 3:**

Change $55^{o}29''$ (55 degrees and 29 seconds) to decimal degree form. Round to three decimal places.

**Problem 4:**

Change $84.78^{o}$ to degrees, minutes, and seconds rounded to whole numbers.

**Problem 5:**




a. Name the angle in two different ways using three capital letters.

b. Name the angle using one capital letter.

c. Name the angle using the Greek letter between the two rays.

**Problem 6:**

Classify the angles as right, straight, acute, or obtuse:

a. $38^o$ b. $95^o$ c. $90^o$ d. $153^o$ e. $10^o$ f. $180^o$

**Problem 7:**

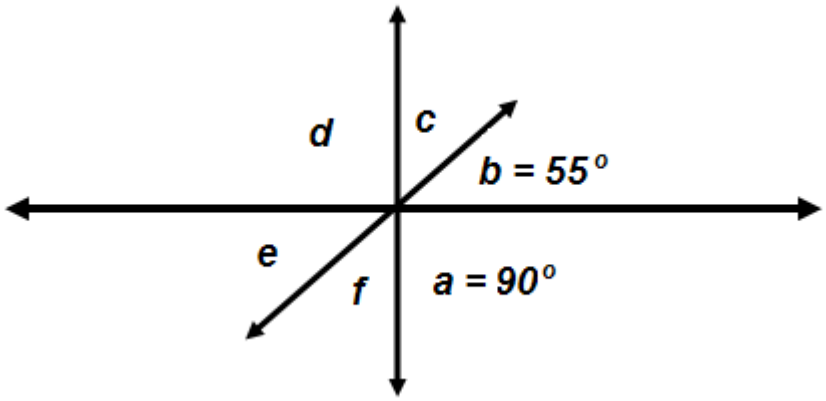
Tell whether the angle pairs are complementary, supplementary, or neither.

a. $42^o$ , $80^o$ b. $17^o$ , $73^o$ c. $38^o$ , $142^o$

d. $52^o$ , $48^o$ e. $60^o$ , $30^o$ f. $110^o$ , $70^o$

**Problem 8:**

In the figure shown below, you are given the measure of two angles. Find the measure of the remaining angles.



SOLUTIONS

You can find detailed solutions below the link for this problem set!

| | |
|---|---|
| 1. $45.24^o$ | 2. $0.57^o$ |
| 3. $55.008^o$ | 4. $84^o46'\ 48''$ |
| 5.<br><br>a. $\angle$DEF or $\angle$FED The vertex point is in the middle!<br>b. $\angle$E Use the letter of the vertex point!<br>c. $\angle\theta$ Use the Greek letter "theta"! | 6.<br>a. $38^o$ - acute angle<br>b. $95^o$ - obtuse angle<br>c. $90^o$ - right angle<br>d. $153^o$ - obtuse angle<br>e. $10^o$ - acute angle<br>f. $180^o$ - straight angle |
| 7.<br>a. $42^o$, $80^o$ - neither supplementary nor complementary<br>b. $17^o$, $73^o$ - complementary<br>c. $38^o$, $142^o$ - supplementary<br>d. $52^o$, $48^o$ - neither supplementary nor complementary<br>e. $60^o$, $30^o$ - complementary<br>f. $110^o$, $70^o$ - supplementary | 8.<br>m$\angle$c = $35^o$<br>m$\angle$d = $90^o$<br>m$\angle$e = $55^o$<br>m$\angle$f = $35^o$ |