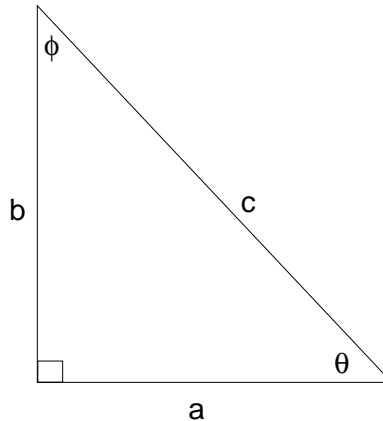


Name: \_\_\_\_\_

**Red Belt Warm-Up**  
**Wednesday March 8, 2006**

1. Answer the questions beneath the following right triangle.



- 1a. In terms of  $a$  and  $b$ ,  $c =$  \_\_\_\_\_.
- 1b. In terms of  $a$  and  $c$ ,  $b =$  \_\_\_\_\_.
- 1c. In terms of  $b$  and  $c$ ,  $a =$  \_\_\_\_\_.
- 1d. In terms of  $a$ ,  $b$  and  $c$ ,  $\sin \theta =$  \_\_\_\_\_.
- 1e. In terms of  $a$ ,  $b$  and  $c$ ,  $\cos \theta =$  \_\_\_\_\_.
- 1e. In terms of  $a$ ,  $b$  and  $c$ ,  $\tan \theta =$  \_\_\_\_\_.
- 1f. In terms of  $a$ ,  $b$  and  $c$ ,  $\sin \phi =$  \_\_\_\_\_.
- 1g. In terms of  $a$ ,  $b$  and  $c$ ,  $\cos \phi =$  \_\_\_\_\_.
- 1h. In terms of  $a$ ,  $b$  and  $c$ ,  $\tan \phi =$  \_\_\_\_\_.

2. The two sides of a right triangle are 3 m and 4 m long, how long is the hypotenuse? Draw a picture of the resulting triangle labeling the sides.

3. One of the angles of a right triangle is  $60^\circ$ . The side opposite it is 1 m long. Draw a figure labeling this angle and the opposite side that's 1 m long. Then find and label the length of the side adjacent to the angle and the length of the hypotenuse. (Hint:  $\sin 60^\circ = \sqrt{3}/2$ ,  $\cos 60^\circ = 1/2$ ,  $\tan 60^\circ = \sqrt{3}$ .)