Math 206 - Quiz 9

Name ___key___

April 27, 2011

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (1.5 points) Section 12-2B, Page 777, Problem #16

BECAUSE BASE $\angle$'S OF ISOSCELES TRIANGLES

ARE CONGRUENT, WE MUST HAVE

$\angle 1 \cong \angle 2$ AND $\angle 3 \cong \angle 4$

IT FOLLOWS THAT

$$m(\angle 1) + m(\angle 4) = m(\angle 2) + m(\angle 3).$$

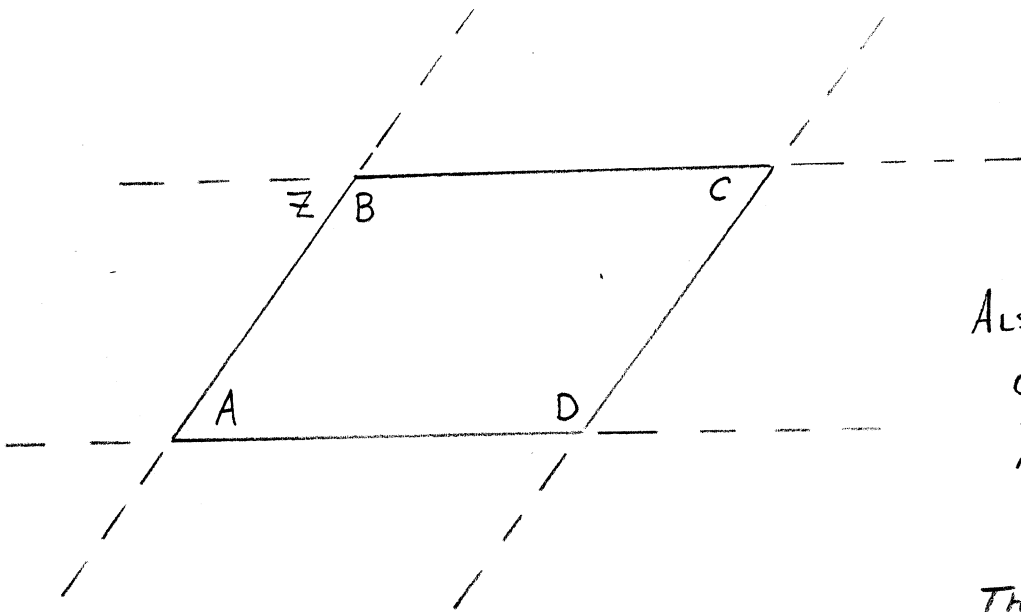2. (1 point) Section 12-2, Page 778, Problem #4

No. IN THE TRIANGLE ON THE LEFT,

TWO ANGLES AND THE INCLUDED SIDE ARE

GIVEN. THESE ARE CONGRUENT TO

TWO ANGLES AND AN ADJACENT SIDE

OF THE TRIANGLE ON THE RIGHT.

No CONGRUENCE PROPERTY APPLIES.

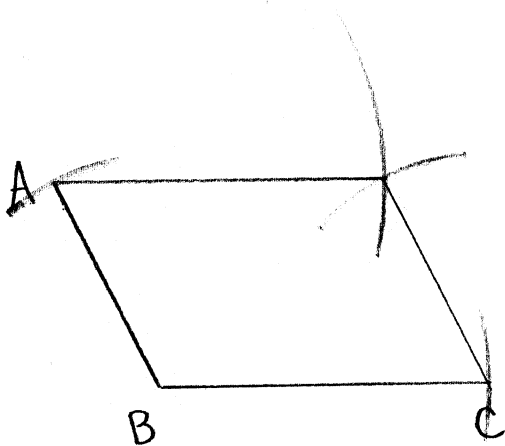3. (1.5 points) Section 12-2B, Page 777, Problem #20a

$\overleftrightarrow{AB}$ IS A TRANSVERSAL OF THE PARALLEL LINES $\overleftrightarrow{AD}$ AND $\overleftrightarrow{BC}$

$\angle A \cong \angle Z$ BECAUSE THEY ARE ALT INT $\angle$'S. ALSO, $\overleftrightarrow{BC}$ IS A TRANS OF THE PARALLEL LINES $\overleftrightarrow{AB}$ AND $\overleftrightarrow{CD}$.

$\angle Z \cong \angle C$ BECAUSE THEY ARE CORRESPONDING $\angle$'s. IT FOLLOWS THAT

$$\angle A \cong \angle C.$$

SIMILAR REASONING SHOWS

$$\angle B \cong \angle D.$$

4. (1 point) Section 12-3A, Page 788, Problem #9