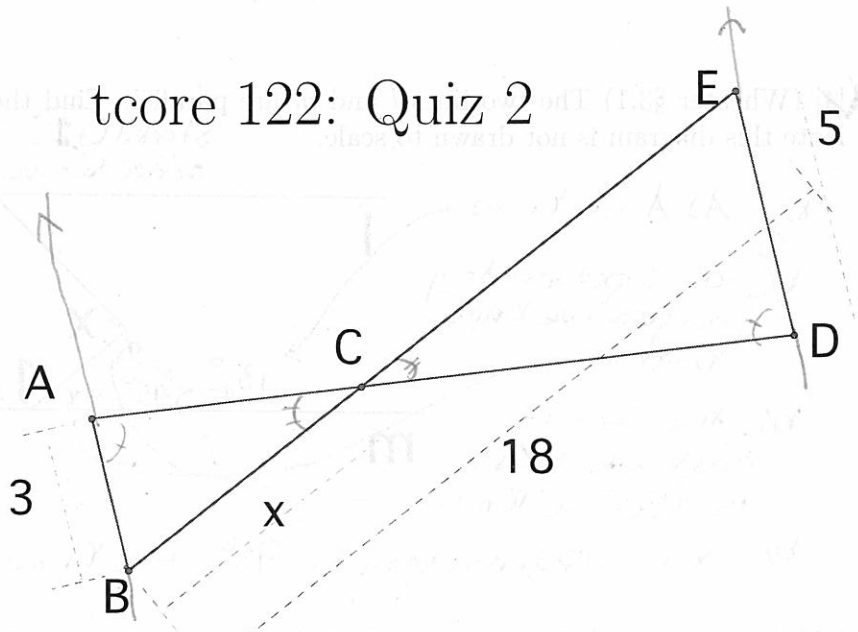
tcore 122: Quiz 2

Key



1. Use the diagram above to answer the following questions. Note this diagram is not drawn to scale.

   (a) [1] (Wheater §3.1) Name a pair of alternating interior angles.

   ∠BAC & ∠CDE work so does ∠ABC & ∠CED

   (b) [3] (Wheater §7.4) Given that the lines $\overline{AB}$ and $\overline{ED}$ are parallel, find the length of x.

   (+5 total)

   (+5) Note $\triangle ACB \sim \triangle DCE$ so by similar $\triangle$

   (+1) $\frac{\overline{AB}}{\overline{DE}} = \frac{\overline{CB}}{\overline{CE}} \Rightarrow \frac{3}{5} = \frac{x}{18-x}$

   (+5) So $\frac{3}{5} = \frac{x}{18-x}$, $18-x$

   $5 \cdot \frac{3}{5}(18-x) = x \cdot 5$

   $54 - 3x = 5x$

   $+3x \quad +3x$

   $54 = 8x$

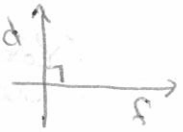
   $\frac{54}{8} = \frac{8x}{8}$

   $x = \frac{54}{8} = \frac{27}{4} = 6.75$

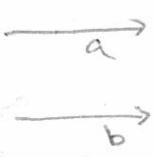
2. [2] (Wheater §3.2) Fill in the blank with the word sometimes, always, or never:

   (a) Line d is perpendicular to line f. Line d is parallel to line g.
   Line f is sometimes perpendicular to line g.

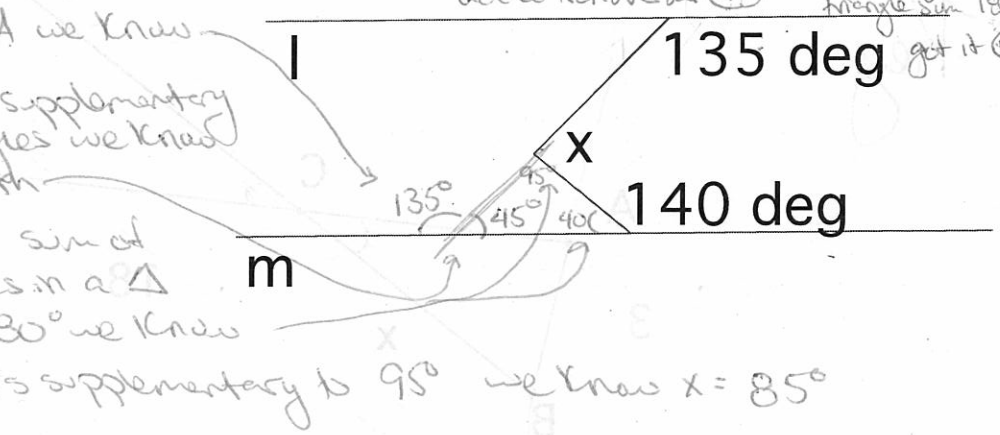
   remember we're in 3D?

   (b) Line a is parallel to line b. Line a is perpendicular to line c.
   Line b is never parallel to line c.

3. [4] (Wheater §3.1) The two lines l and m are parallel. Find the measure of angle x. Note this diagram is not drawn to scale.



stated (+.5) added transversal (+.5) corr. ∠1∠4, ∠4∠4 connect (+1) 3 supp. angles (+.5) triangle sum 180° (+.5) get it (+.5)

by AIA we know
b/c of supplementary angles we know both
b/c the sum of angles in a △ is 180° we know
b/c x is supplementary to 95° we know x = 85°

180 − 135 = 45 | 180 − 140 = 40 | 180 − 85 = 95

4. [1] Richard Johnson-Sheehan described three different types of technical documentation. Name one of the types that we will focus on in this class.

instructions or procedures/protocol

5. [3] Write down two of the suggestions Richard Johnson-Sheehan offers authors who are writing instructions.

order steps sequentially
use command voice
put only 1 action per step
be concise
the steps
add comments, notes + examples
provide feedback
refer to graphics.

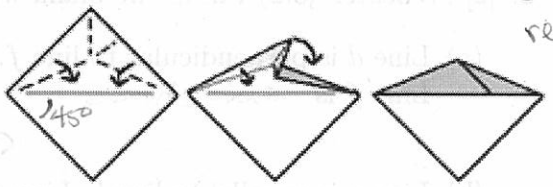
each is worth (+1) stated (+.5) sense/true (+.5)

6. [2] (Lang §2.1) Hypothesize why the open sink fold has the name open sink.

b/c it looks like a sink
(the fold forms a dip that is easily opened)

stated (+.5) sense (+1)

7. [4] (Lang §2.1) Consider the rabbit-ear fold pictured below. Treat the top half of the finished origami square as one colored triangle. Find the measure of the three angles in the triangle and briefly justify yourself.



start (+1) reasoning (+.5)

Rabbit fold uses an angle bisector (+.5)
so 2 bottom angles are $\frac{45°}{2} = 22.5°$ (+1)

180 − 45 = 135

Since the sum of angles in a △ are 180°, the top angle is 135° (+.5) (+.5)