

Graphing Lines & Angles

September 5, 2008

WARM-UP

$$C : (-3, 3)$$

a. Plot: $U : (1, 0)$

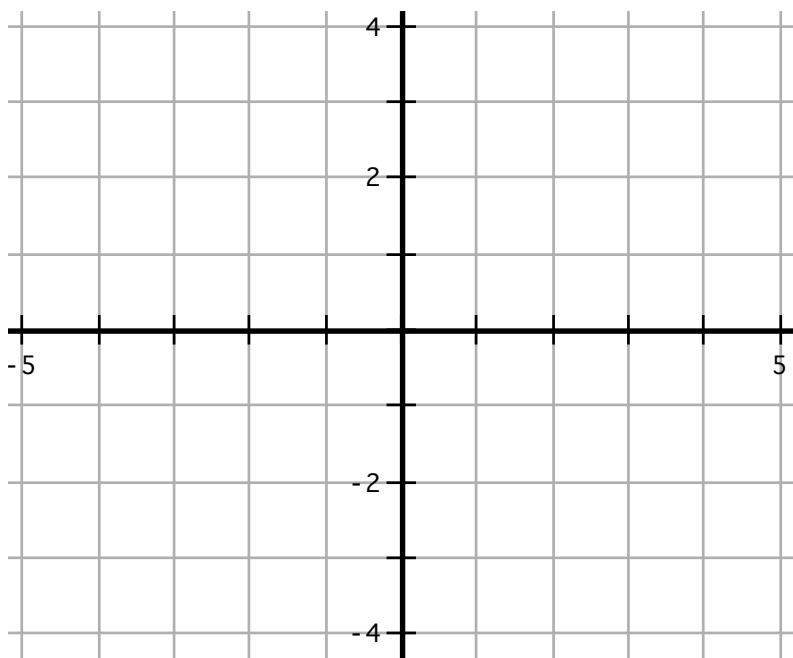
$$B : (-2, -4)$$

b. Calculate CU , UB , and BC

c. Use your calculator to convert your lengths to decimals if necessary.

d. Use a ruler to measure CU , UB , and BC to check your calculations

e. So far we have been using the Pythagorean theorem (or distance formula) to find the length of the longest side of a right triangle. The Pythagorean theorem can also be used in reverse – if you know the three sides of a triangle and $a^2 + b^2 = c^2$ then the triangle must be a right triangle. Use the decimals you found in part *c* to test if triangle CUB is a right triangle.



MEASURING ANGLES

a. Graph $y = 2x - 1$

b. Graph $2x + 2y = 4$

c. Graph the line that passes through $(-3, 0)$ and $(5, 1)$

$$J : (-3, 0)$$

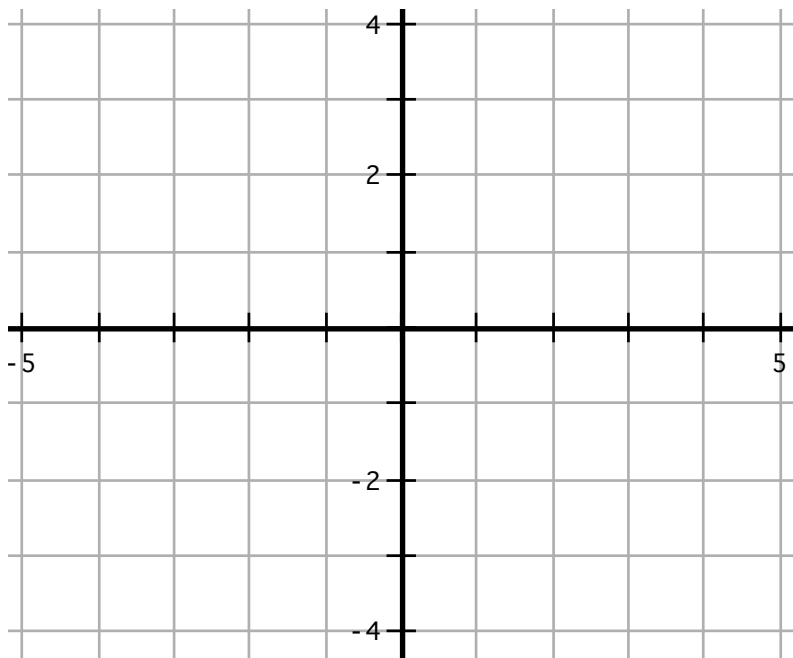
$$E : (1, 1)$$

d. Plot: $T : (-1, 0)$

$$D : (5, -3)$$

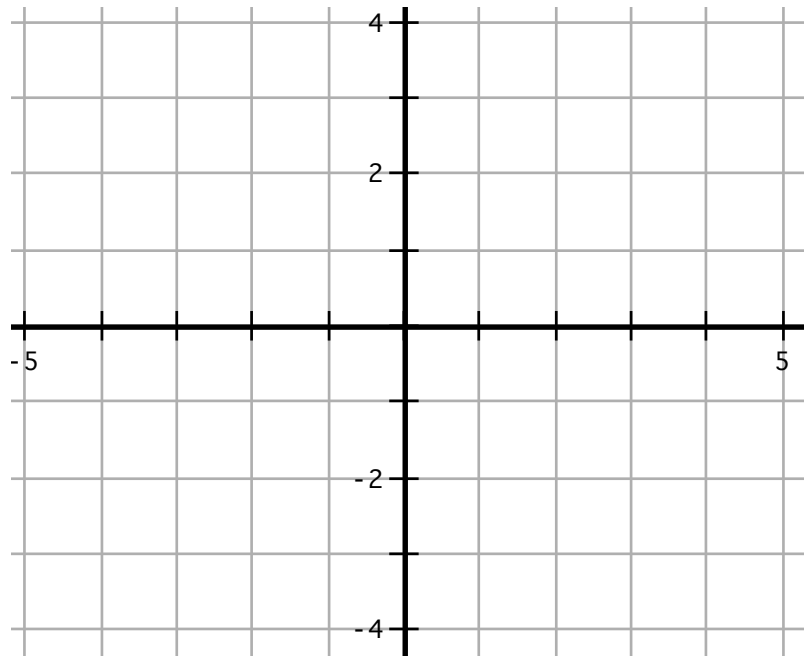
$$N : (5, 1)$$

e. Use a protractor to measure $\angle JET$, $\angle TED$, and $\angle DEN$



YOUR TURN TO DRAW

- Graph $2x + 3y = -3$
- Use a protractor to draw a ray starting at $(0, -1)$ that forms a 40° angle with your line



ONE FINAL CHALLENGE

- Plot:
 $A : (5, 2)$
 $B : (-1, 4)$
 $C : (-3, 1)$
 $D : (-2, -6)$
- Draw \overline{AB} , \overline{CD} and \overline{AC}
(Notice two are rays and one is a line)
- Use a protractor to measure $\angle BAC$
- Calculate CB
- Write the equation of \overline{AC}

