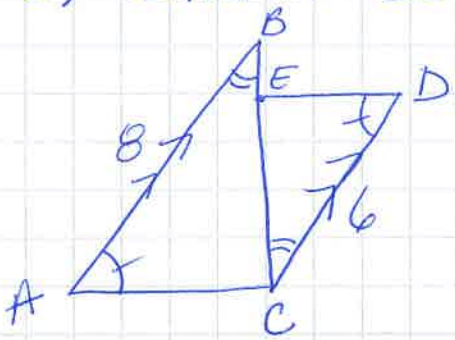
Homework 6-23 through 6-28

6-23

a) The 3 angles are not the same in each triangle.

Not similar or congruent

b) similar but not congruent



$\angle B = \angle DCE$ (alt. int angles)

$\angle A = \angle D$ (given)

$\triangle ABC \sim \triangle DCE$

AA~

6-24

a) $(2, -3)$ $m = \frac{5}{2}$

$-3 = \frac{5}{2}(2) + b$

$-3 = 5 + b$

$-8 = b$

$y = \frac{5}{2}x - 8$

b) $(4, 7)$ $-3x + 2y = 10$

$2y = 3x + 10$

$y = \frac{3}{2}x + 5$

$m = \frac{3}{2}$

$7 = \frac{3}{2}(4) + b$

$7 = 6 + b$

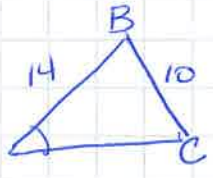
$1 = b$

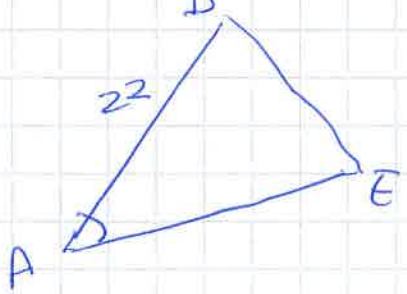
$y = \frac{3}{2}x + 1$

6-25

$\frac{DE}{10} = \frac{22}{14}$

$DE \approx 15.71$





6-26

a) yes AAS $\cong$ $\quad \triangle DEF \cong \triangle LJK$
or
ASA $\cong$

b) Translation — rotation - reflection

c) X

6-27

$b + 2a = C \qquad 2a + b = 10$

$C = 10$ (substitution)

6-28

212 in geometry 64 are freshman
112 sophomores

a) $\frac{64}{212} + \frac{112}{212} = \frac{176}{212} \approx 83\%$

b) 114 band 56 chorus

$P(\text{Band}) + P(\text{Chorus}) - P(\text{Band and Chorus})$

$\frac{114}{212} + \frac{56}{212} - x = .75$

$.54 + .26 - x = .75$

$.8 - x = .75$

$-x = -.05$

$x = 5\%$