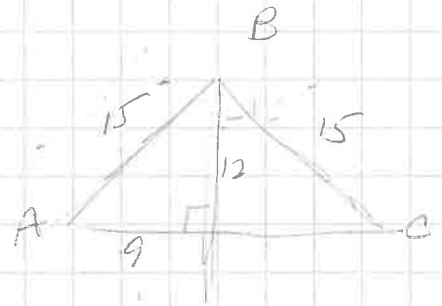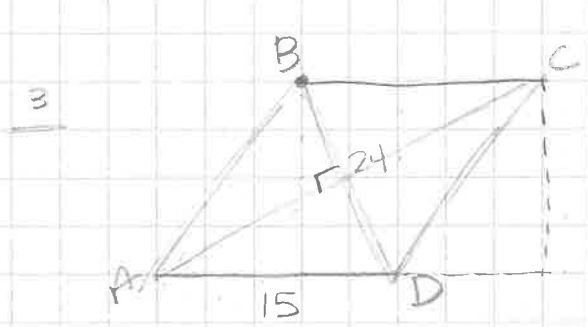homework 7-43 to 7-48

7-43

a) $360 \div 36 = 10$ sides

b) regular decagon

7-44

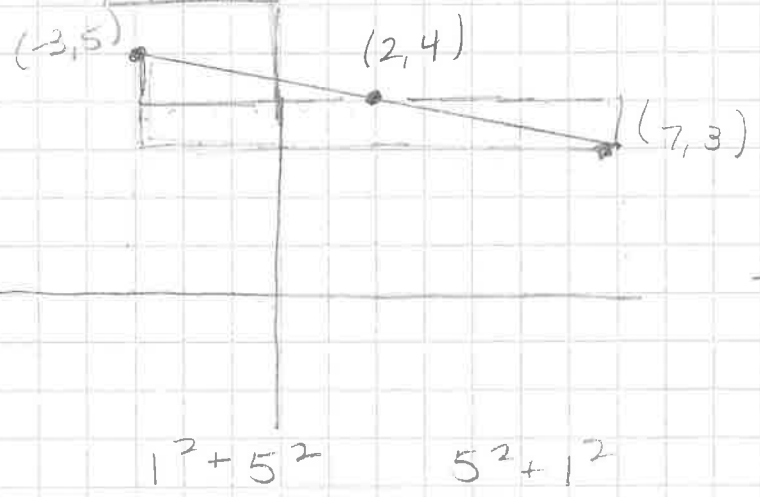
$15^2 - 12^2 = \sqrt{81}$

9

$\boxed{AC = 18 \text{ units}}$

7-45

$(-3,5)$ $(2,4)$ $(7,3)$

$2^2 + 10^2$
104

$\sqrt{(-3-7)^2 + (5-3)^2}$

$\sqrt{100 + 4} \qquad = \sqrt{104}$

$1^2 + 5^2 \qquad 5^2 + 1^2$

yes, it is the midpoint because
the distance from $(-3,5)$ to $(2,4)$
and $(2,4)$ to $(7,3)$
are both hypotenuse's of triangles
with congruent legs

7-46

a) similar

$\angle C = \angle Y$ — Given

$\angle A = \angle Z$ — Triangle Sum Thm.

$\triangle ABC \sim \triangle ZXY$

AA~

b) Not similar

c)

$\dfrac{FE}{BU} = \dfrac{1}{2}$

$\dfrac{FD}{BC} = \dfrac{1}{2}$

$\dfrac{ED}{UC} = \dfrac{1}{2}$

$\triangle FED \sim \triangle BUC$

SSS~

7-47

a) CPCTC

c) alt. interior angles are =

7-48

A

6

$\sqrt{40}$

$\sqrt{34}$

C

3

2 B   5

C is closer