Chapter 1 - Vocab

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Deductive Reasoning Example

$5+6+7+8+9$

Conjuncture: the sum of the integers of 5 consecutive numbers is always 5 times the median.

$S = x-2, x-1, x, x+1, x+2$

$S = (x-2)+(x-1)+(x)+(x+1)+(x+2)$

$S = 5x+0$

$= 5x$

Proven ✓

deductive reasoning #2

conjuncture: The difference between two consecutive perfect squares is always an odd number.

$D = (x+1)^2 - x^2$

$(x+1)(x+1) - x^2$

$x^2 + x + x + 1 - x^2$

$2x + 1$

always even

Karyssa's proof

$-5 = 5$	- I start with my conjecture
$(-5)^2 = 5^2$	- I square both sides
$25 = 25$	- I see $25 = 25$
$\therefore -5 = 5$	- Therefore $-5 = +5$

Prove $3=4$

$a+b=c$

$4a-3a+4b-3b=4c-3c$

$4a+4b-4c=3a+3b-3c$

$\frac{4(a+b-c)}{a+b-c}=\frac{3(a+b-c)}{a+b-c}$

$4=3$

Proven ✓ Not Proven

$a+b=c$

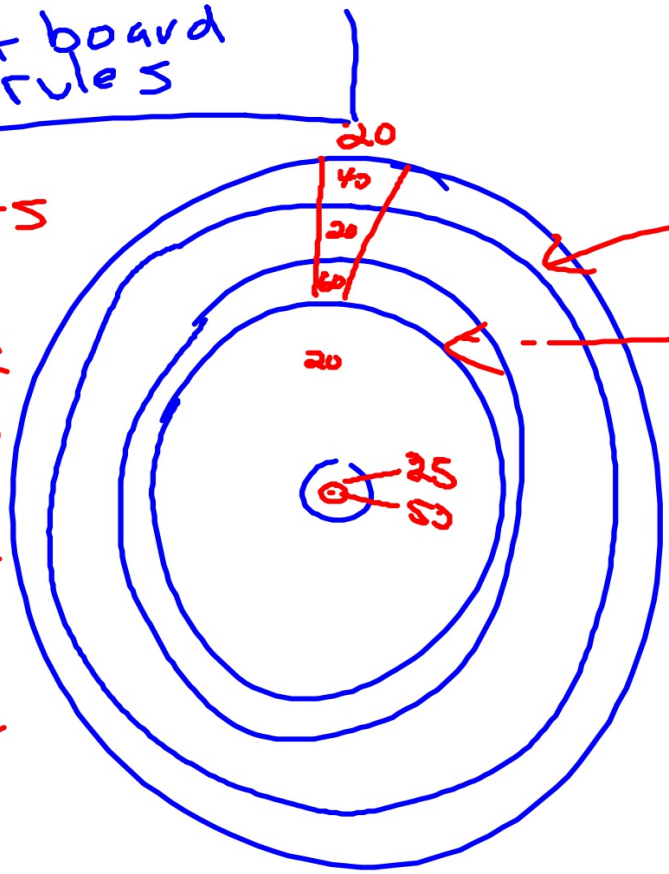
$a+b-c=0$

Dart board rules

3 darts

To finish exactly the score you need

You must end on a double



90 need this

50
20
double 10
90.
✓

Practice ch #1 Pg 60-61

1, 4, 7, 10, 13, 15, 16

Chapter 2 vocab

Exterior Angles of a polygon pg 69
tranversal pg 70
Corresponding angles pg. 71
cor.
Converse pg 71
exterior angles pg 73
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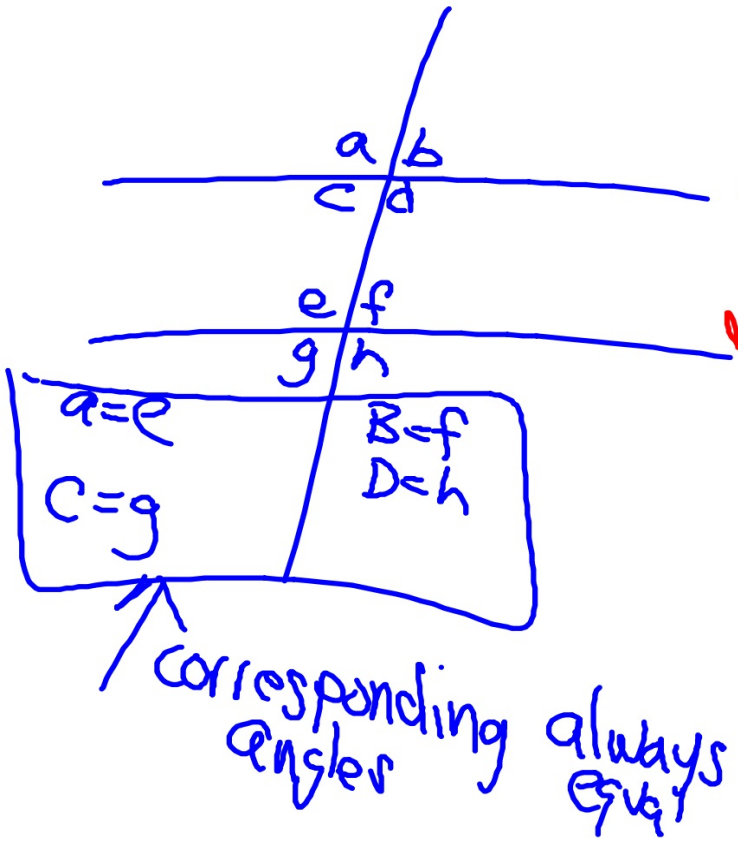
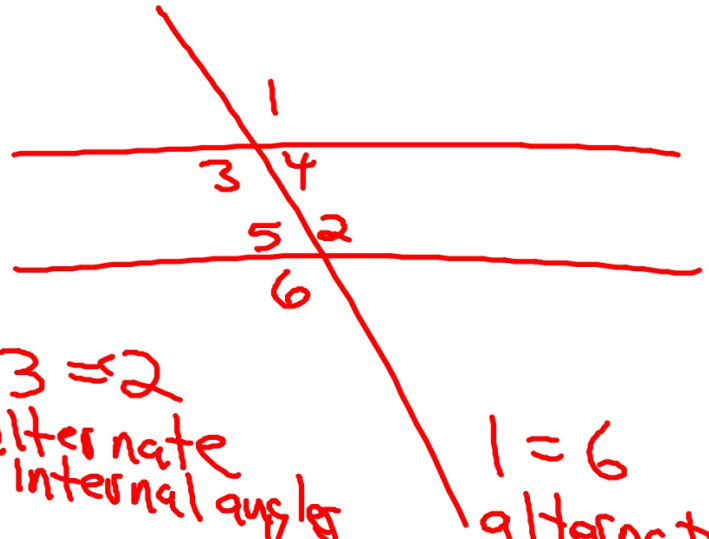
Transversal lines



corresponding angles always equal

When lines are not ~~Parallel~~ Parallel the corresponding angles are not equal

other angles



$\angle 5 + \angle 2 = 180^\circ$

supplementary angles

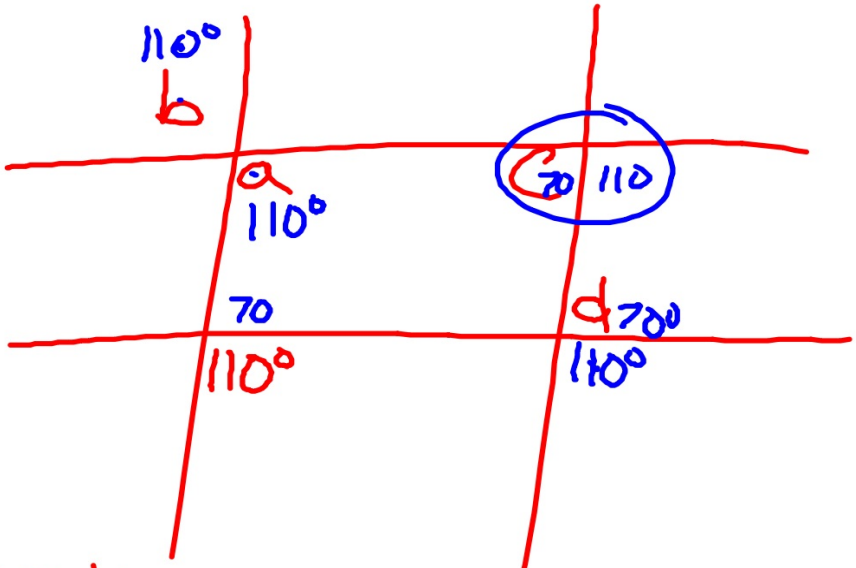
$\angle 3 = \angle 2$

alternate internal angles

$1 = 6$

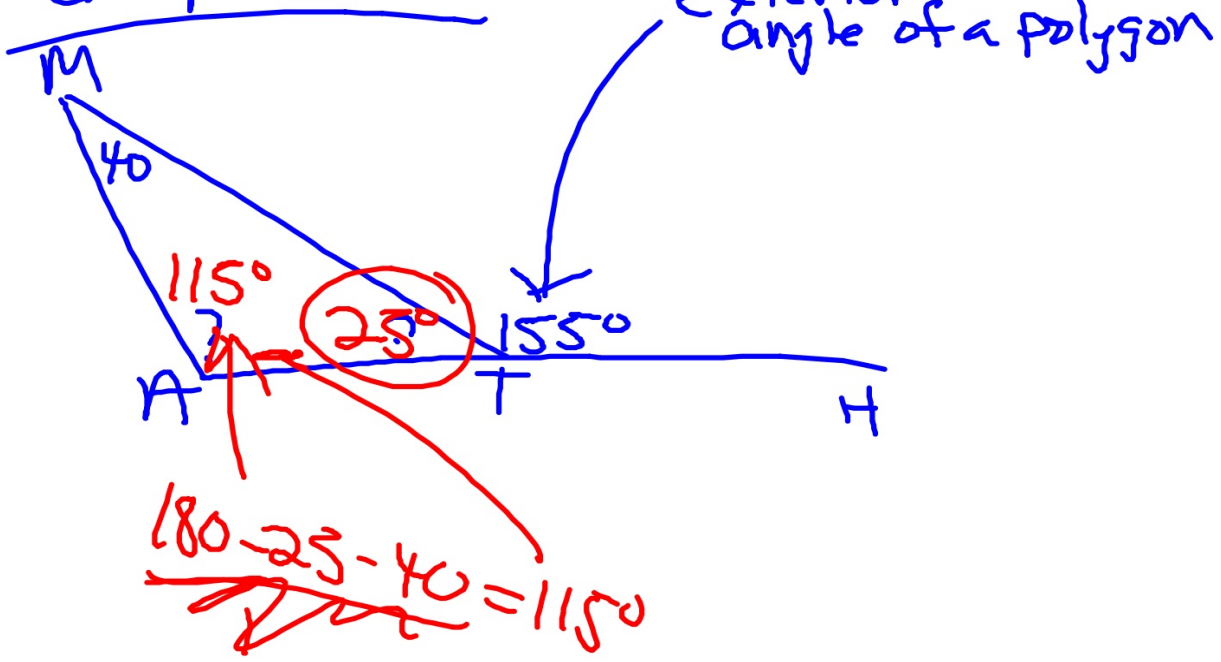
alternate external angles

example

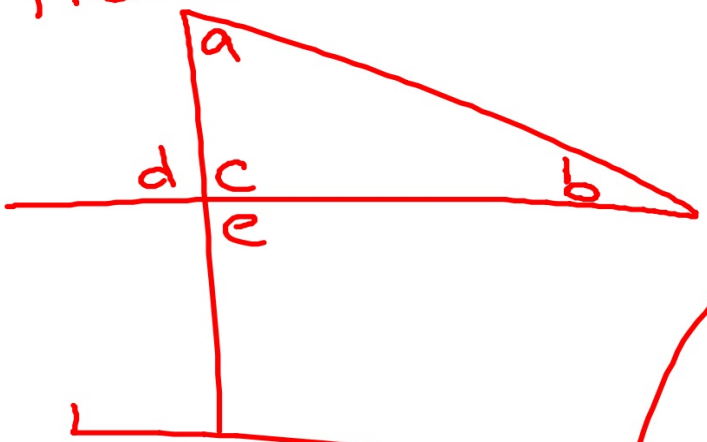


a = 110° - corresponding angles
b = 110° - opposite angles
c = 70°
d =

example #2



Prove $\angle E = \angle a + \angle b$



$d + c = 180$

$\angle d = 180 - \angle c$

$a + b + c = 180$

$a + b = 180 - \angle c$

$\Rightarrow \angle d = \angle a + \angle b$

Exterior angle property

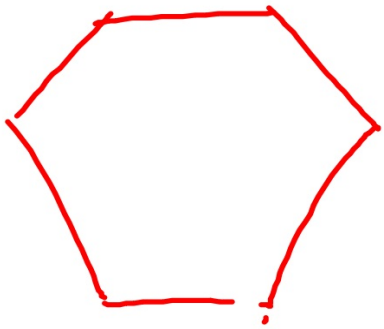
Supplementary Property + transitive property

$\rightarrow \angle e = \angle d$

Vertical opposite angles

$\rightarrow \angle e = \angle a + \angle b$

transitive property



SAS
SSS
ASA

$S(n) = 180(n-2)$

$6 = 180(n-2)$

$6 = 180(6-2)$

$6 = 180(4)$

$\frac{6}{6} = \frac{720}{6}$

$= 120^\circ$

Practice #2 pg 119-120

1, 2, 5, 7, 8, 10, 12, 15