ch 4.1

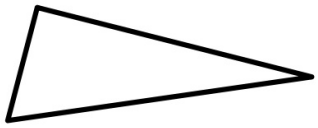
A triangle is a 3 sided polygon.

A triangle with the vertices A,B,C

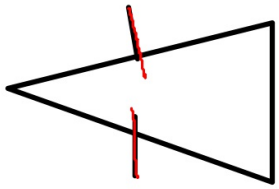
can be named △ABC

Classifying triangles by side

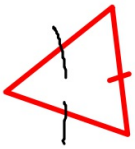
scalene: no congruent sides



isosceles: 2 congruent sides

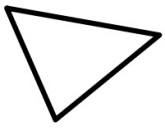


Equalateral: all sides congruent



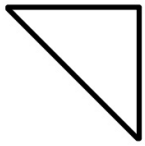
Classify by angle

Acute



3 acute angles

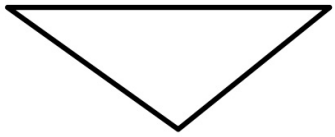
Right



1 right angle

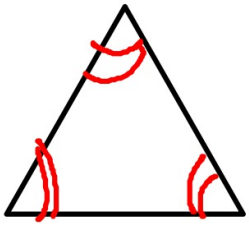
90°

Obtuse



1 obtuse angle

Equilangular



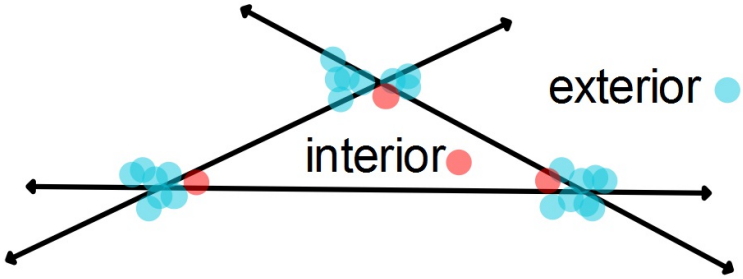
all 3 angles equal

acute angle Less than 90°

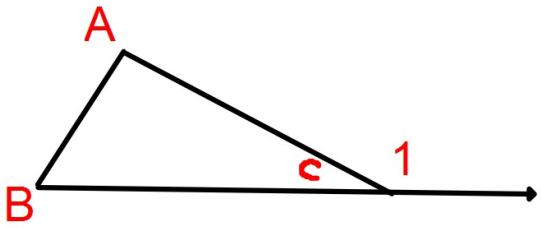
Right angle = 90°

Obtuse angle Greater than 90°

Angles



The 3 interior angles of a triangle always add up to 180°



$m\angle A + m\angle B = m\angle 1$

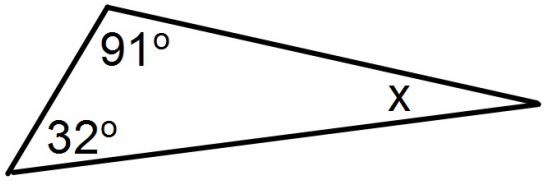
also

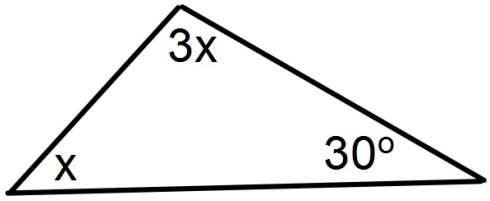
$180 - m\angle C = m\angle 1$

Ex

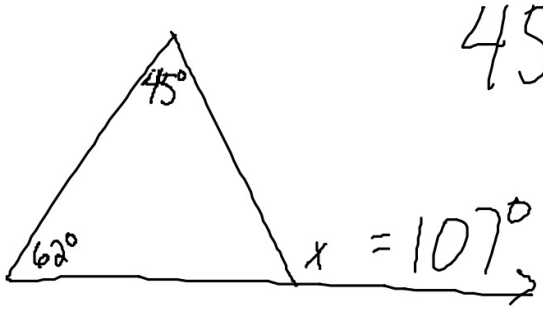
find x

$180° -$





$45+62=107^{\circ}$

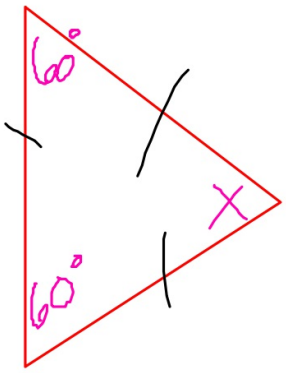


1-16 Pg 211

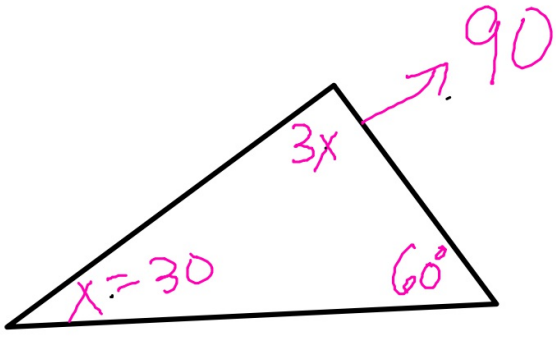
Home work:
pg 211 1-16

1. $30^{\circ}, 60^{\circ}, 90^{\circ}$ — Right △
2. Sides 2m, 2m, 2m — Equilateral
3. $60^{\circ}, 60^{\circ}, 60^{\circ}$ — equiangular
4. 6m, 3m, 6m — Isosceles
5. 4ft, 3ft, 5ft — Scalene
6. $20^{\circ}, 125^{\circ}, 35^{\circ}$ - Obtuse

Home work review



180
- 60
120
- 60
60° = X



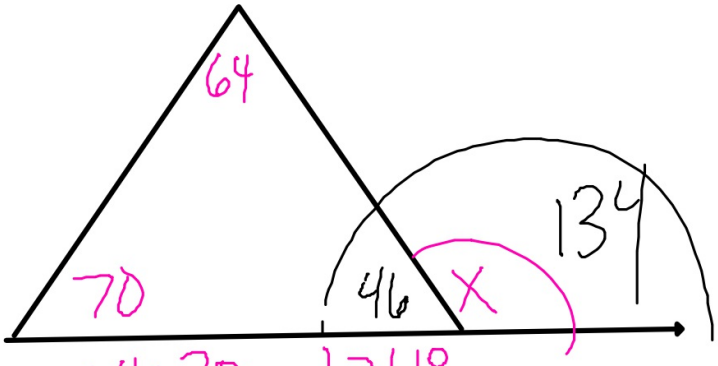
X = 30

$3x + X + 60^\circ = 180$

$4x + 60^\circ = 180$

$-60 \quad -60$

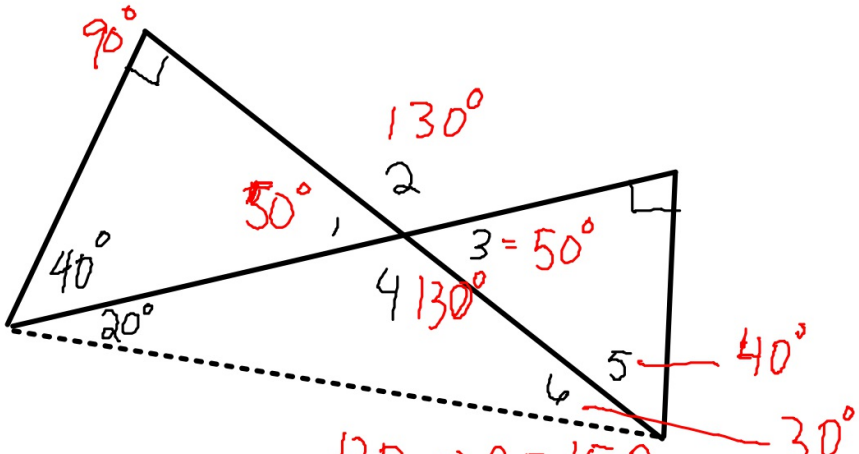
$\frac{4x}{4} = \frac{120}{4}$



64+70 = 134°

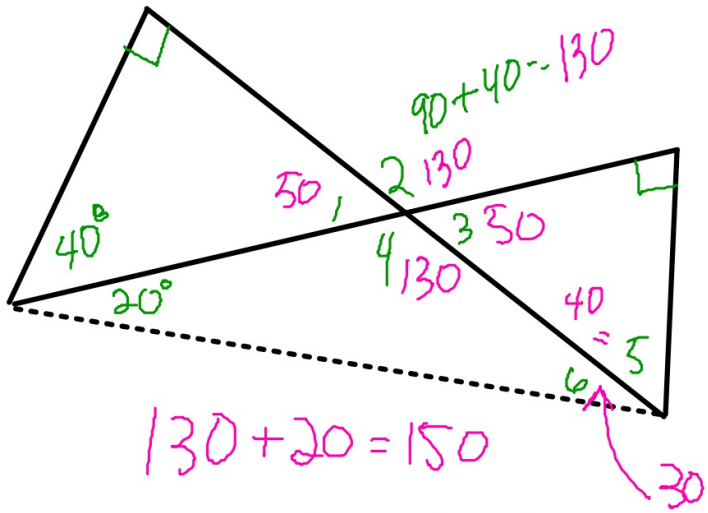
90+40=130

180-130=50



130+20=150

180
-150
30°



90+40=130

180-130=50

50+90=140

180-140=40

130+20=150

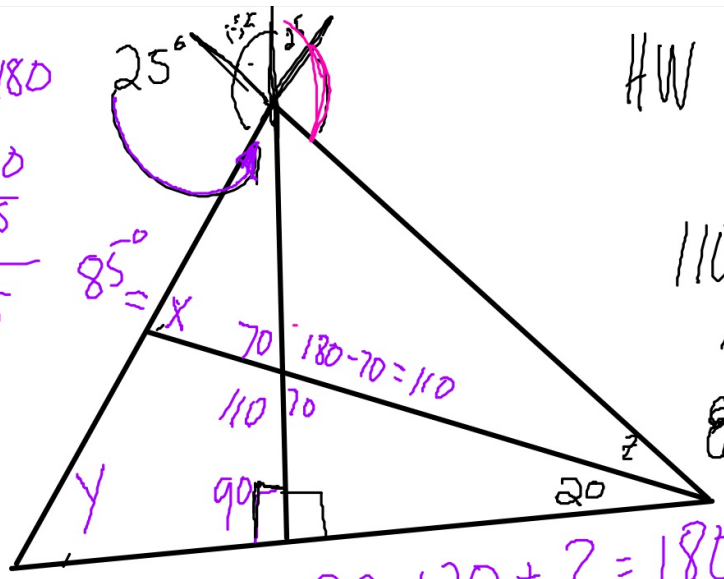
180-150=30

HW.

212

32-33

Quiz Question



X+25+70=180

X+95=180

-95 -95

X=85

HW Pg 212

32-33

110+25=

110+Z=25+9

85+Z=Q

90+25

115

115+Y=180

-115 -115

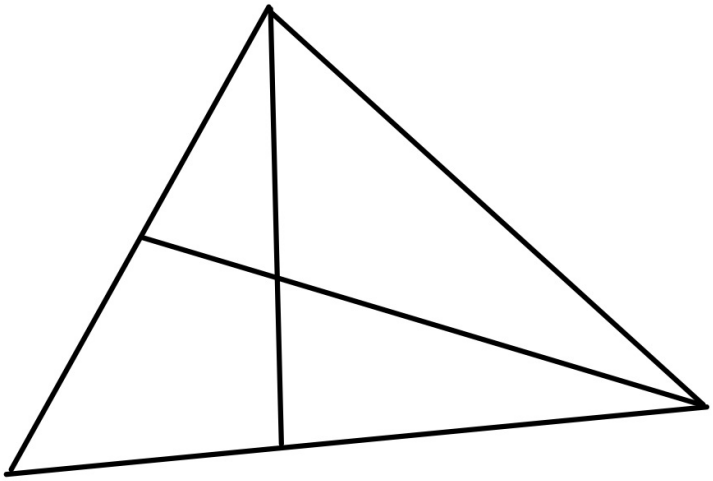
Y=65

90+20+?=180

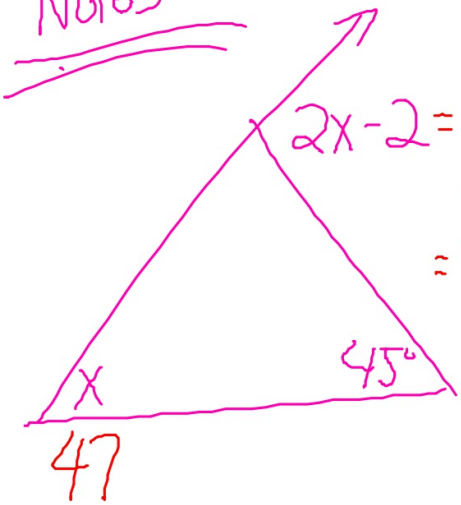
110+?=180

-110 -110

?=70



Notes



Quiz Question

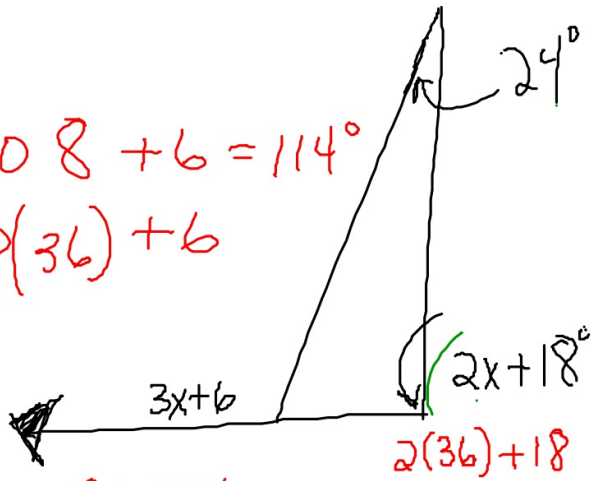
$x+45=2x-2$

$-x \quad -1x$

$-45=x-2$

$+2 \quad +2$

$47=x$



108 + 6 = 114°

3(36) + 6

90 + 24

114°

2(36) + 18

72 + 18

90°

Quiz Question

24 + 2x + 18 = 3x + 6

-2x -2x

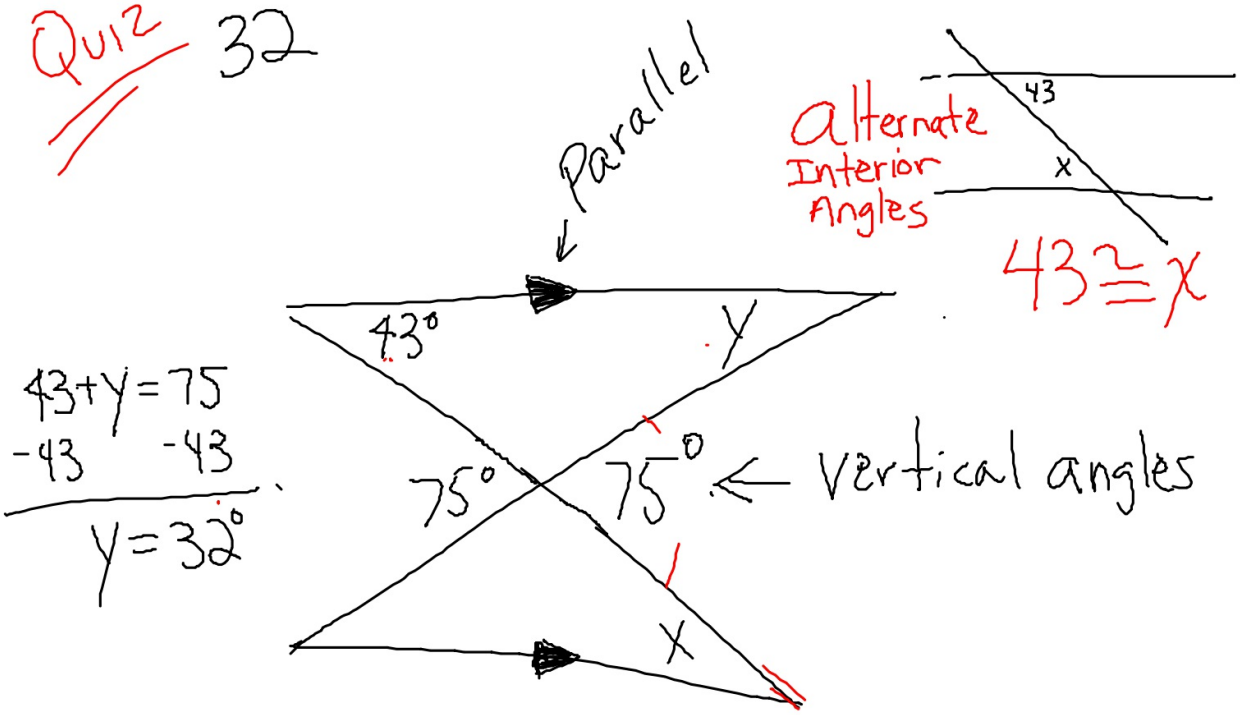
24 + 18 = x + 6

42 = x + 6

-6 -6

36 = x

Quiz 32



43 + y = 75

-43 -43

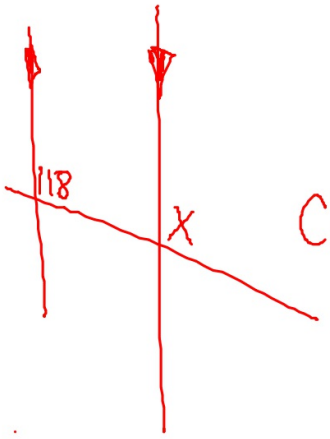
y = 32°

alternate Interior Angles

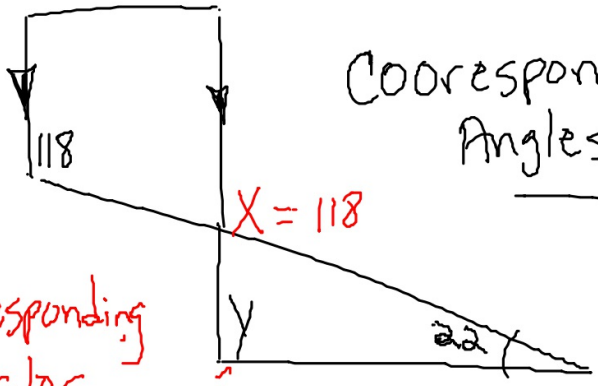
43 ≅ x

← vertical angles

33 Quiz



Corresponding Angles



Coorresponding Angles

$Y + 22 = 118$

$-22 \quad -22$

$Y = 96$

Quiz

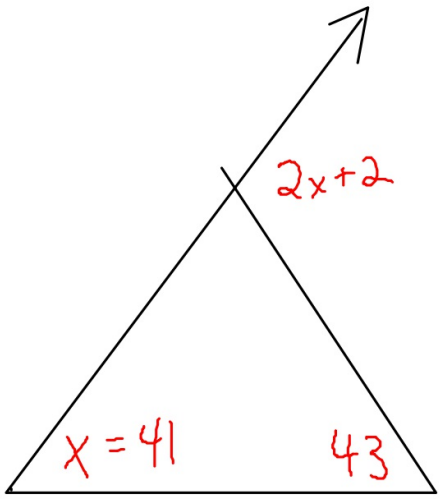
$X + 43 = 2x + 2$

$-2 \quad -2$

$X + 41 = 2x$

$-1x \quad -1x$

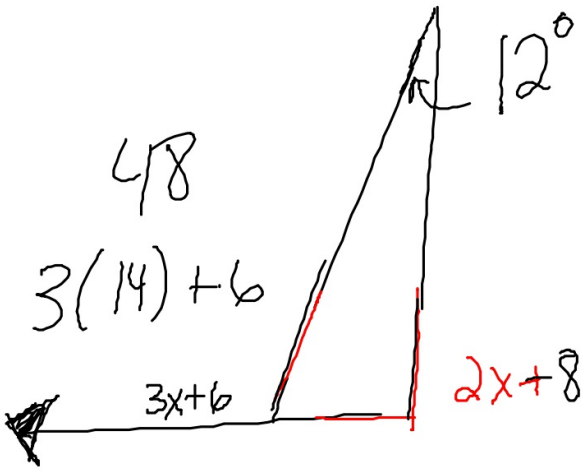
$41 = X$



$2(41) + 2$

$82 + 2$

$84°$



Quiz Question

48

$3(14)+6$

$2(14)+8$

$28+8=36$

$12+2x+8=3x+6$

$2x+20=3x+6$

$-6 \quad -6$

$2x+14=3x$

$-2x \quad -2x$

$14=x$