Geometry

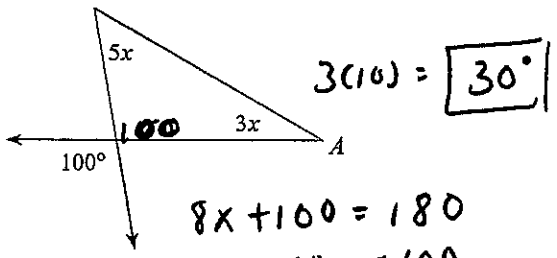
Name_____

Triangles Challenge

Date_____ Period____

Find the measure of angle A.

1)



$3(10) = \boxed{30°}$

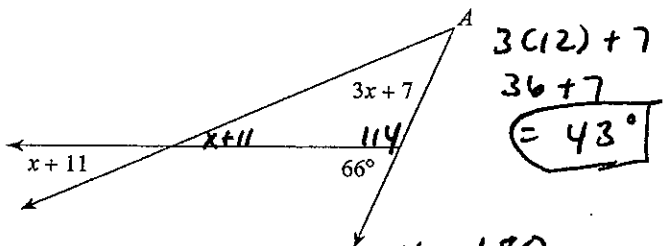
$8x + 100 = 180$

$-100 \quad -100$

$8x = 80$

$x = 10$

2)



$3(12) + 7$

$36 + 7$

$= 43°$

$x + 11 + 3x + 7 + 114 = 180$

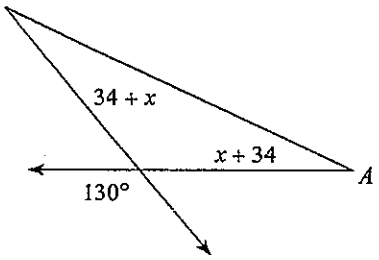
$4x + 132 = 180$

$-132 \quad -132$

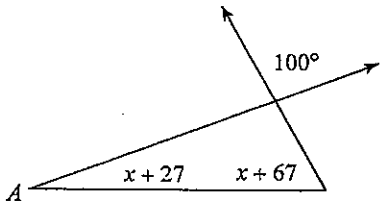
$4x = 48$

$x = 12$

3)



4)



Sketch an example of the type of triangle described. Mark the triangle to indicate what information is known. If no triangle can be drawn, write "not possible."

5) right isosceles

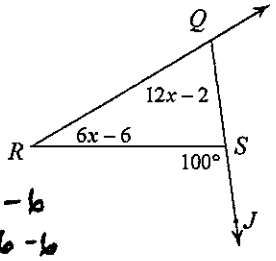
6) acute isosceles

7) obtuse scalene

8) acute scalene

Find the measure of the angle indicated.

9) Find $m\angle R$.



$6X-6+12X-2=100$

$18X-8=100$

$+8 \quad +8$

$18X=108$

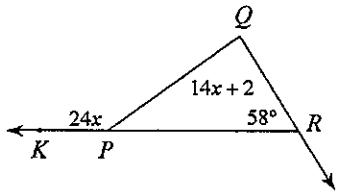
$X=6$

$6(6)-6$

$36-6$

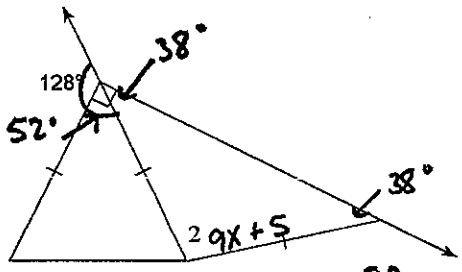
$=30°$

10) Find $m\angle KPQ$.



Find the value of x.

11) $m\angle 2 = 9x + 5$



$38+38+9X+5=180$

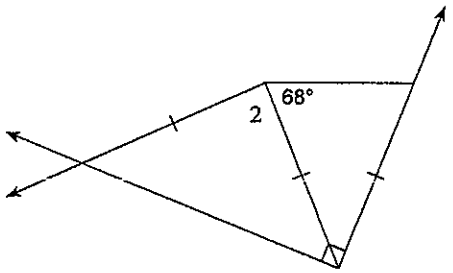
$81+9X=180$

$-81 \quad -81$

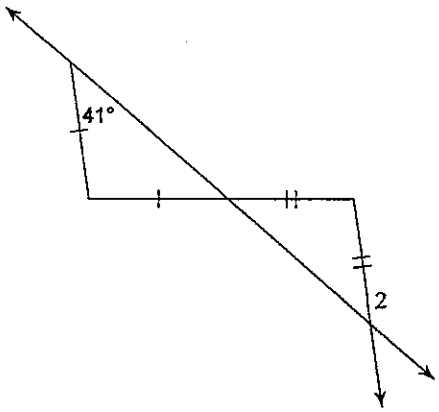
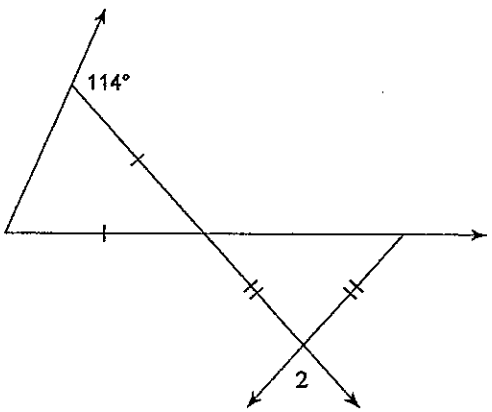
$9X=99$

$X=11$

12) $m\angle 2 = x + 102$



13) $m\angle 2 = 151 + x$



14) $m\angle 2 = 6x$