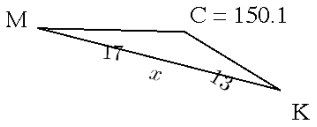
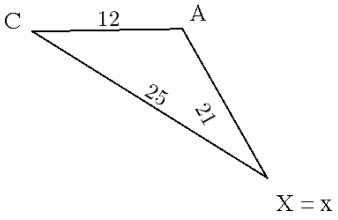
NAME:
DATE:
Mr. Nockles

More Rotation Practice

1)



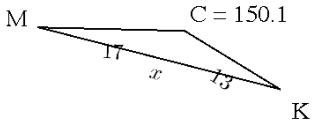
2)



ANSWERS

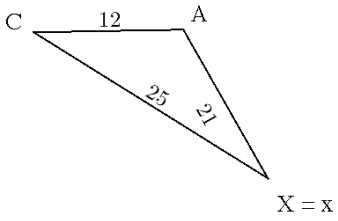
9301

1)



$(a)^2 + (b)^2 - 2(a)(b)\cos(C)$	=	$(c)^2$	Law of Cosines (General form)
$(MC)^2 + (KC)^2 - 2(MC)(KC)\cos(m\angle KCM)$	=	$(KM)^2$	Law of Cosines
$(17.0)^2 + (13.0)^2 - 2(17.0)(13.0)\cos(150.1)$	=	$(KM)^2$	Substitute.
$289.0 + 169.0 + 383.1683$	=	$(KM)^2$	Evaluate.
841.1683	=	$(KM)^2$	Simplify.
29.0	=	KM	Square root.

2)



$(a)^2 + (b)^2 - 2(a)(b)\cos(C)$	=	$(c)^2$	Law of Cosines (General form)
$(AX)^2 + (CX)^2 - 2(AX)(CX)\cos(m\angle CXA)$	=	$(CA)^2$	Law of Cosines
$(21.0)^2 + (25.0)^2 - 2(21.0)(25.0)\cos(m\angle CXA)$	=	$(12.0)^2$	Substitute.
$441.0 + 625.0 - 1050.0(\cos(m\angle CXA))$	=	144.0	Evaluate.
$-441.0 - 625.0$		$-441.0 - 625.0$	Subtract
$-1050.0(\cos(m\angle CXA))$	=	-922.0	Simplify
$\frac{}{-1050.0}$		$\frac{}{-1050.0}$	Divide
$\cos(m\angle CXA)$	=	0.8781	Simplify
$m\angle CXA$	=	$\cos^{-1}(0.8781)$	Take $\cos^{-1}$ of both sides.
$m\angle CXA$	=	28.6	Simplify