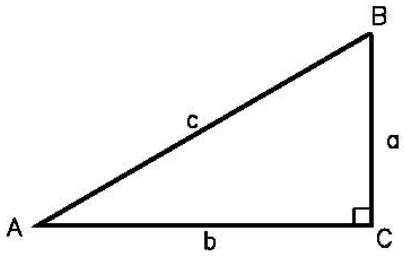
TRIG–STAR MISCELLANEOUS DATA

RIGHT TRIANGLE FORMULAS



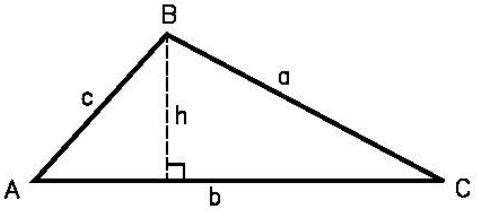
PYTHAGOREAN THEOREM: $a^2 + b^2 = c^2$

AREA: $\frac{1}{2}ab$

TRIGOMETRIC FUNCTIONS: $\sin A = \frac{a}{c}$ $\cos A = \frac{b}{c}$

$\tan A = \frac{a}{b}$

OBLIQUE TRIANGLE FORMULAS



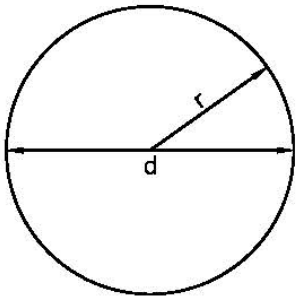
LAW OF SINES: $\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$

LAW OF COSINES: $a^2 = b^2 + c^2 - 2bc\cos A$

$\cos A = \frac{b^2 + c^2 - a^2}{2bc}$

AREA: $\frac{1}{2}bh$

CIRCLE FORMULAS



DIAMETER = d RADIUS = r

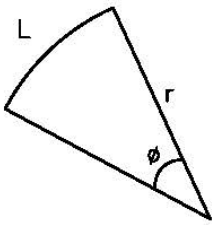
CIRCUMFERENCE: $2\pi r$ or πd

AREA: πr^2

ONE DEGREE (1°) OF ARC = 60 MINUTES (60') OF ARC

ONE MINUTE (1') OF ARC = 60 SECONDS (60") OF ARC

THEREFORE ONE DEGREE OF ARC (1°) = 3600 SECONDS OF ARC.



ARC LENGTH = $2\pi r\phi/360$

AREA: $\pi r^2(\phi/360)$

TRIG-STAR ANSWER KEY LOCAL COMPETITION

PAGE 1

∠ CBA =	57°27'36"
DISTANCE AC =	161.65

PAGE 1

∠ EGF =	17°45'45"
DISTANCE EH =	82.98
DISTANCE FH =	74.73
DISTANCE FG =	244.96
DISTANCE GH =	233.28

PAGE 2

DISTANCE AB =	217.45
DISTANCE AD =	331.35
DISTANCE AC =	373.20

PAGE 3

DISTANCE BC =	242.50
DISTANCE BG =	198.00
DISTANCE GH =	160.42
ARC DISTANCE AD =	83.30
AREA OF LOT 1 = B,C,G,B =	12,851
AREA OF LOT 3 = A,H,G,D,ARC DA =	11,716