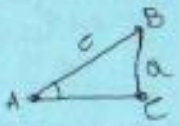
[23] $\tan(60) = \frac{x\sqrt{2}}{x} = \frac{\sqrt{2}}{1}$ ✓

COSECANT (RECIPROCAL OF SINE)

$\sin(A) = \frac{o}{H} = \frac{a}{c}$




$\csc(A) = \frac{H}{o} = \frac{c}{a}$

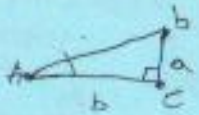
SECANT (RECIPROCAL OF COSINE)

$\cos(A) = \frac{A}{H} = \frac{b}{c}$

$\sec(A) = \frac{H}{A} = \frac{c}{b}$

COTANGENT (RECIPROCAL OF TANGENT)

$\tan(A) = \frac{o}{A} = \frac{a}{b}$

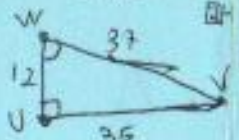



$\cot(A) = \frac{A}{o} = \frac{b}{a}$

[24]

$\csc(X) = \frac{5}{3} = \frac{5}{3}\left(\frac{4}{0}\right)$

[25]




$\sec(W) = \frac{37}{12}$

[26]

$\cot(t) = \frac{a}{o} = \frac{A}{O} = \frac{24}{7}$

[27] $\csc(45°) = \frac{x}{x\sqrt{2}/2} = \frac{x\sqrt{2}}{x}$

$\csc(45°) = \frac{\sqrt{2}}{1}$ ✓

[28] $\cot(<B) = \frac{7}{24}$ ✓

[29] $\sec(<B) = \frac{17}{15}$ ✓

[30] $\csc(<A) = \frac{20}{12} = \frac{5}{3}$ ✓

[31] $\cot(<A) = \frac{6}{8} = \frac{3}{4}$ ✓

[32] $\sec(<A) = \frac{25}{7}$

[33] $\csc(<A) = \frac{H}{O} = \frac{H}{O} = \frac{13}{5}$

[34] $\cot(<B) = \frac{a}{A} = \frac{b}{o} = \frac{8}{6} = \frac{4}{3}$ ✓

[35] $\sec(<A) = \frac{A}{H} = \frac{H}{A} = \frac{10}{8} = \frac{5}{4}$ ✓

[36] $\csc(<B) = \frac{10}{6} = \frac{5}{3}$ ✓

[37] $\cot(<A) = \frac{3}{4}$

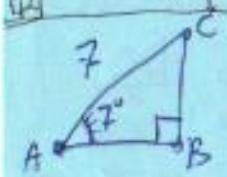
[38] $\sec(<B) = \frac{10}{6} = \frac{5}{3}$ ✓

[39] $\csc(<A) = \frac{13}{12}$ ✓

[40] $\cot(<B) = \frac{15}{8}$

[41] $\sec(<A) = \frac{13}{5}$ ✓

[42]




$\sin(7) = \frac{o}{7}$

$o = 7\sin(7)$

$o = 0,853085484$

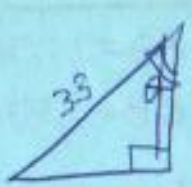
$7^2 = o^2 + c^2$ ← $\overline{CB}$

$c^2 = 7^2 - o^2$

$c = 6,94782306 = \overline{AB}$

7/14 = 1/2 SCORE

[43]




$\theta = 14°$

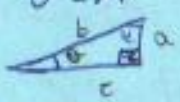
$t = 14\,s$

$\sin(14) = \frac{o}{33}$

$o = 7,98342255$

$o = 33\sin(14)$ ✓

$\theta = 14°$ $\alpha = 26°$




$\frac{a}{\sin(\alpha)} = \frac{b}{\sin(z)} = \frac{c}{\sin(\gamma)}$

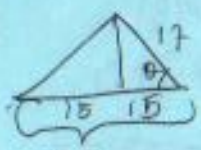
$c^2 = a^2 + b^2 - 2ab\cos(\alpha)$

[46] $\csc(<B) = \frac{o}{H} = \frac{H}{O} = \frac{17}{8}$ ✓

[47] $<B = \cos^{-1}\left(\frac{2}{5}\right) = 66,421$ ✓

[48] $AC = \frac{o}{7} \to \sin(40) = \frac{o}{7} \to o = 7\sin(40)$ ✓ $o = 4,49951327$

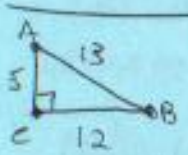
[49]




$\theta = \cos^{-1}\left(\frac{15}{17}\right)$

$\theta = 28,0724869$

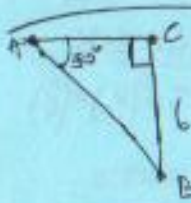
[50]




$\cot(<A) = \frac{A}{O} = \frac{5}{12}$

$\cot(<A) = 0,4166666667$

[51]



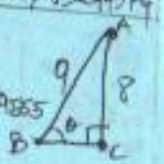

$AB = \sin(30) = \frac{6}{H}$

$H = \frac{6}{\sin(30)}$ 30

$H = 12 \to 7,832443774$

[52] $<B = \sin(\theta) = \frac{8}{9}$

$<B = \sin^{-1}(8/9) = 62,73939855$




[53]

[54] $\sec(A) = \cos(A) = \frac{A}{H} = \frac{H}{A} = \frac{20}{16}$ ✓

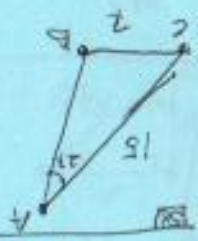
$m<B = 180 - 77 = 103°$

$\approx$

$\sin^{-1}((\sin(8))) = 76,16150665°$

$\sin(8) = 0,9732325428$

[55]




$\sin(8) = \frac{15\sin(37)}{z}$

$\sin(8) = \frac{15}{z}\sin(37)$

$m<B \approx 103°$

$\sin^{-1}(0,8532) = 58,86666°$ ✓

$\sin(c) = \frac{15\sin(47)}{6} = 0,8532325423$

$\frac{a}{\sin(47)} = \frac{15}{\sin(c)} \to \frac{6}{\sin(47)} = \frac{z}{\sin(c)}$

[56]

$BC = 6,95$

$\frac{BC}{\sin(47)} = \frac{AB}{\sin(103)}$

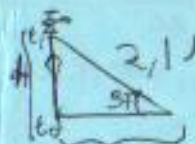
$BC = 6,95904740$

$\frac{BC}{\sin(B)}$

$\frac{BC}{\sin(47)} = \frac{9}{\sin(103)}$

$BC = \frac{9}{\sin(103)}\sin(47)$

[57]




$\sin(37) = \frac{o}{2,1\,km}$

$o = \cancel{2,1\sin(37)}$

$o = \cancel{1,26381155\,km}$

$o = \sin(37) \times 2,1\,km = 1,26381158\,km$

$\cancel{\tan(37) = \frac{AB}{1,26} = AB = \tan(37) \times 1,26\,km}$

$\cancel{AB = 0,952350311\,km}$

$2,1^2 = 1,26^2 + c^2$ $c^2 = 2,1^2 - 1,26^2$

$c^2 = 2,82$ $c = \sqrt{2,82}$ $c = 1,68$ ✓