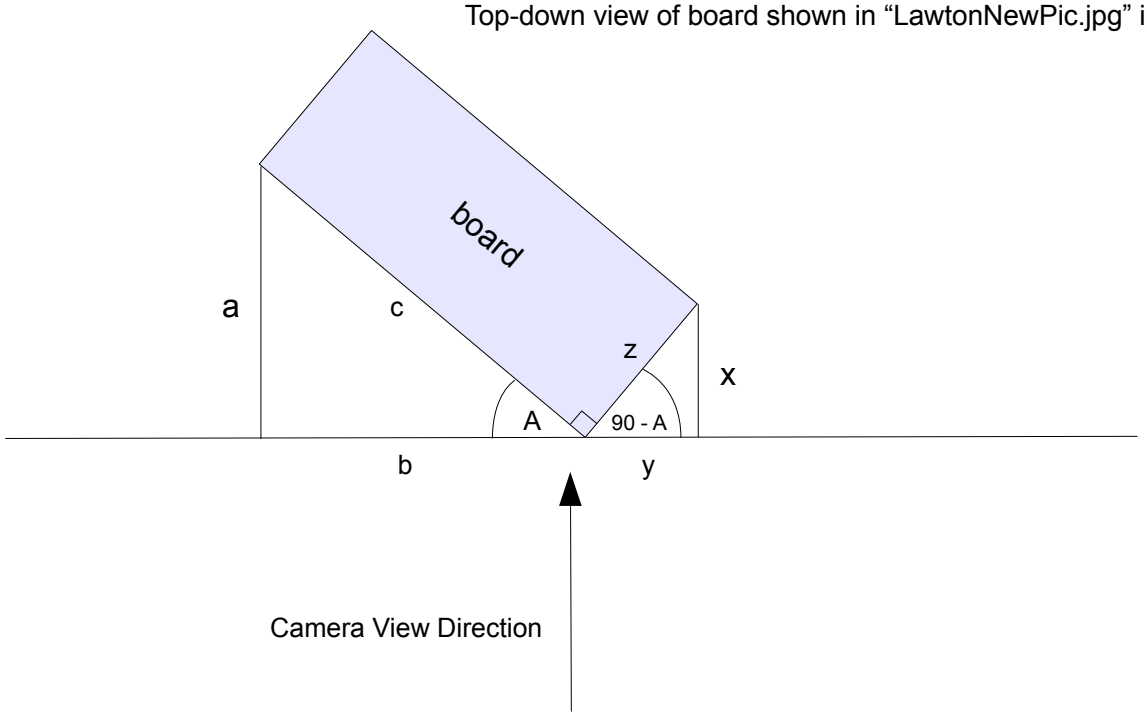
Top-down view of board shown in “LawtonNewPic.jpg” image



Upper board measurements

$b = c \cos(A)$ $\quad y = z \cos(90 - A)$

$105 = c \cos(A)$ $\quad 68 = z \cos(90 - A)$

$\frac{105}{c} = \cos(A)$ $\quad \frac{68}{z} = \cos(90 - A)$

Lower board measurements

$b = c \cos(A)$ $\quad y = z \cos(90 - A)$

$117 = c \cos(A)$ $\quad 58 = z \cos(90 - A)$

$\frac{117}{c} = \cos(A)$ $\quad \frac{58}{z} = \cos(90 - A)$

Note: sin (A) = cos (90 – A)

$\cos(A) = \frac{105}{c}$ $\quad \sin(A) = \frac{68}{z}$

$\cos(A) = \frac{117}{c}$ $\quad \sin(A) = \frac{58}{z}$

$$\frac{\sin(A)}{\cos(A)} = \frac{\frac{68}{z}}{\frac{105}{c}} = \frac{68\,c}{105\,z}$$

$$\frac{\sin(A)}{\cos(A)} = \frac{\frac{58}{z}}{\frac{117}{c}} = \frac{58\,c}{117\,z}$$

Note: tan (A) = sin (A) / cos (A)

$$\tan(A) = 0.648\,\frac{c}{z}$$

$$\tan(A) = 0.496\,\frac{c}{z}$$

$$\frac{\text{Fish Length (pixels)}}{\text{Board Width (pixels)}} = \frac{\text{Fish Length (inches)}}{\text{Board Width (inches)}}$$

Fish = 2500 pixels long (*image size = 2000 x 3239 pixels*)

Upper board measurements

$\tan(A) = 0.648 \frac{c}{z}$

Lower board measurements

$\tan(A) = 0.496 \frac{c}{z}$

2.00” x 4.00” board: (c / z = 2.00)

tan (A) = 0.648 (2.00)
tan (A) = 1.296
A = 52.3 degrees

Length = (2500 / 105) * 4 cos (52.3)

Length = 58.2”

tan (A) = 0.496 (2.00)
tan (A) = 0.992
A = 44.8 degrees

Length = (2500 / 117) * 4 cos (44.8)

Length = 60.6”

1.75” x 3.75” board: (c / z = 2.14)

tan (A) = 0.648 (2.14)
tan (A) = 1.387
A = 54.2 degrees

Length = (2500 / 105) * 3.75 cos (54.2)

Length = 52.2”

tan (A) = 0.496 (2.14)
tan (A) = 1.061
A = 46.7 degrees

Length = (2500 / 117) * 3.75 cos (46.7)

Length = 55.0”

1.50” x 3.50” board: (c / z = 2.33)

tan (A) = 0.648 (2.33)
tan (A) = 1.510
A = 56.5 degrees

Length = (2500 / 105) * 3.50 cos (56.5)

Length = 46.0”

tan (A) = 0.496 (2.33)
tan (A) = 1.156
A = 49.1 degrees

Length = (2500 / 117) * 3.50 cos (49.1)

Length = 49.0”