

Scale Conversion Chart

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Note: Match the scale you're working in on the right, with the scale you want to convert to on the top.

	1/200	1/192	1/144	1/100	1/96	1/76	1/72	1/50	1/48	1/35	1/32	1/25	1/24
1/200	100.00%	104.17%	138.89%	200.00%	208.33%	263.16%	277.78%	400.00%	416.67%	571.43%	625.00%	800.00%	833.33%
1/192	96.00%	100.00%	133.33%	192.00%	200.00%	252.63%	266.67%	384.00%	400.00%	548.57%	600.00%	768.00%	800.00%
1/144	72.00%	75.00%	100.00%	144.00%	150.00%	189.47%	200.00%	288.00%	300.00%	411.43%	450.00%	576.00%	600.00%
1/100	50.00%	52.08%	69.44%	100.00%	104.17%	131.58%	138.89%	200.00%	208.33%	285.71%	312.50%	400.00%	416.67%
1/96	48.00%	50.00%	66.67%	96.00%	100.00%	126.32%	133.33%	192.00%	200.00%	274.29%	300.00%	384.00%	400.00%
1/76	38.00%	39.58%	52.78%	76.00%	79.17%	100.00%	105.56%	152.00%	158.33%	217.14%	237.50%	304.00%	316.67%
1/72	36.00%	37.50%	50.00%	72.00%	75.00%	94.74%	100.00%	144.00%	150.00%	205.71%	225.00%	288.00%	300.00%
1/50	25.00%	26.04%	34.72%	50.00%	52.08%	65.79%	69.44%	100.00%	104.17%	142.86%	156.25%	200.00%	208.33%
1/48	24.00%	25.00%	33.33%	48.00%	50.00%	63.16%	66.67%	96.00%	100.00%	137.14%	150.00%	192.00%	200.00%
1/35	17.50%	18.23%	24.31%	35.00%	36.46%	46.05%	48.61%	70.00%	72.92%	100.00%	109.38%	140.00%	145.83%
1/32	16.00%	16.67%	22.22%	32.00%	33.33%	42.11%	44.44%	64.00%	66.67%	91.43%	100.00%	128.00%	133.33%
1/25	12.50%	13.02%	17.36%	25.00%	26.04%	32.89%	34.72%	50.00%	52.08%	71.43%	78.13%	100.00%	104.17%
1/24	12.00%	12.50%	16.67%	24.00%	25.00%	31.58%	33.33%	48.00%	50.00%	68.57%	75.00%	96.00%	100.00%

Scale Conversion Formula By: Rob Johnson (robj@speechsys.com)

Scales are ratios of measures in like units: 1/72 is 1 inch on the model = 72 inches on the full-sized original (or 1 centimeter, furlong, or parsec on model to 72 of same at full size).

1. The desired scale is then the existing scale times some unknown percentage or fraction, i.e. the conversion factor (either enlargement or reduction):

$$\text{DesiredScale} = \text{ExistingScale} * \text{ConversionFactor}$$

2. Therefore, to find the conversion factor, we regroup and divide to get the universal scale conversion formula:

$$\text{ConversionFactor} = \text{DesiredScale} / \text{ExistingScale}$$

Example: to convert 1/72 to 1/48

$$\text{ConversionFactor} = 1/48 / 1/72 = 72 / 48 = 1.5 = 150\%$$

A 6-ft (72-inch) pilot figure is thus 1-in tall in 1/72 scale and 1.5-in tall in 1/48 scale.

Advantages of the formula: You can always figure out the intermediate ratios correctly when using photocopier enlargement. In the above example, most copiers would not do the full 150% in one pass. Most copiers max out at 121% or 141%. I have seen almost every other possible figure too. So having a chart of common scale conversions is not likely to be all that useful in many cases. Using the formula, you just figure out what the scale will be after the 121% enlargement:

$$\text{IntermediateScale} = (\text{ExistingScale} * .121) + \text{ExistingScale}.$$

Then you use IntermediateScale as the ExistingScale in the formula.