



## Learning how to convert inches and get the point in the end

1. In journalism, instead of using inches or centimeters to measure and line up components on a spread, a student uses points and picas. By introducing these new measurements, a student has more precision to line up components without wasting white space on the spread.
2. To convert measurements, 1 inch= 6 picas, and 1 pica= 12 points. Therefore, one inch would equal 72 points (6 picas times 12 points). This concept takes time for students to learn because it is not how they have learned measurements in mathematics.
3. Inches are typically displayed as a number with quotation marks after (e.g. 1.25") and typically don't include other measurements. Picas and points are displayed differently and together, on either side of the letter p. Picas appear before the p, and points after the p (e.g. 15p1, 2p0, 3p11).
4. When a measurement reaches 12 points, the 12 points round to the next pica followed by 0 points: 0p12 becomes 1p0, 1p12 becomes 2p0, etc. Picas will never be rounded up to inches and will always read their true value, such as 112p0.
5. Sometimes, measurements will contain fractions of a point, most notably on a computer. There should not be fractions of points in a measurement, but an easy remedy is to reposition or resize a component to eliminate these fractions. For example, if a component has a height of 12p3.2, merely resize it to 12p3. This only works using computer software that shows a student the exact measurement. When drawing out designs, a student will not be able to see these values.
6. It's easier to convert from inches to picas then picas into points. To convert from inches to picas, a student merely needs to multiply the number of inches by 6. This even works for fractions of an inch. 2 inches becomes  $2 \times 6 = 12$  picas. 8.5 inches becomes  $8.5 \times 6 = 51$  picas. 5.25 inches becomes  $5.25 \times 6 = 31.5$  picas.
7. When fractions occur in the pica conversion, the fraction of the pica needs to be converted into points by multiplying by 12. So, .5 pica becomes  $.5 \times 12 = 6$  points. Therefore, this value would be written as 31p6 instead of 31.5.
8. When converting from points to picas, and picas to inches, a student divides points by 12 to get picas, and divides picas by 6 to get inches. However, this will likely result in remainders. When a measurement has remainders, the remainders become the number after the p in a pica measurement. For example,  $100 / 12 = 8$  picas, with 4 remaining points written as 8p4.

9. The tricky part occurs when a student tries to convert picas back into inches, particularly if the measurement includes points. Picas without any points are much easier to convert. For example, 8 picas becomes  $8/6=1$  with 2 picas remaining. To find out the conversion, divide  $2/6= 3$ . Then the student divides 10 by 3, which becomes  $3/10$  or .33333333 measurement. So 8 picas is 1.3333333 inches.

10. Another way to convert picas into inches would be for a student to convert the pica into points first, then divide by 72 points. Remember, there are 12 points in a pica and 6 picas in an inch; therefore, there are 72 points in an inch. In this method, 8 picas becomes 96 points, and  $96/72= 1.3333333$ . It may be easier for some students to divide using this method.

11. Understanding how to convert takes practice, so practice with the examples below:

a. Standard piece of paper (8.5"x11") = 51p0 x 66p0

b. Postcard (3.5"x5") = 21p0 x 30p0

c. Website banner (650p x 210 p) = 54p2 x 17p6 picas

d. Website banner (650p x 210 p) = 9.02" x 2.92" inches

Show your work below for credit.

a. 
$$\begin{array}{r} 8.5 \quad .5 \times 6 = 3.0 \\ \times 6 \quad 8 \times 6 = 48 \\ \hline 51.0 \quad 48 + 3 = 51 \end{array} \qquad \begin{array}{r} 11 \\ \times 6 \\ \hline 66 \end{array}$$

b. 
$$\begin{array}{r} 3.5 \quad .5 \times 6 = 3.0 \\ \times 6 \quad 3 \times 6 = 18 \\ \hline 21.0 \quad 18 + 3 = 21 \end{array} \qquad \begin{array}{r} 5 \\ \times 6 \\ \hline 30 \end{array}$$

c. 
$$\begin{array}{r} 650 \quad 65/12 = 5 \text{ and } 5 \text{ leftover} \\ /12 \quad 50/12 = 4 \text{ and } 2 \text{ leftover} \\ \hline 54p2 \quad 54p2 \end{array} \qquad \begin{array}{r} 210 \quad 21/12 = 1 \text{ and } 9 \text{ leftover} \\ /12 \quad 90/12 = 7 \text{ and } 6 \text{ leftover} \\ \hline 17p6 \quad 17p6 \end{array}$$

d. 
$$\begin{array}{r} 650 \quad 650/72 = 9 \text{ with } 2 \text{ leftover} \\ /72 \quad 20/72 = 0 \text{ with } 20 \text{ leftover} \\ \hline 9.02 \quad 200/72 = 2 \end{array} \qquad \begin{array}{r} 210 \quad 210/72 = 2 \text{ and } 66 \text{ leftover} \\ /72 \quad 660/72 = 9 \text{ and } 12 \text{ leftover} \\ \hline 2.91 \quad 120/72 = 1 \end{array}$$