**Colour printing**, process whereby illustrative material is reproduced in [colour](https://www.britannica.com/technology/colour-separation-process) on the printed page. The [four-colour process](https://www.britannica.com/technology/four-color-process-printing) is used to produce a complete range of colours. In this process, the material to be reproduced is separated into three basic colours plus black, which is used for density and image contrast. The basic colours are cyan, a combination of blue and green; magenta, a combination of red and blue; and yellow, a combination of red and green. Many ink makers and printers call cyan “process blue,” magenta “process red,” and yellow “process yellow.”

After colour separation in the [photoengraving](https://www.britannica.com/technology/photoengraving) or offset-platemaking process, a separate [printing](https://www.britannica.com/topic/printing-publishing) plate is made for each of the four colours. When printed in the proper colour (using transparent ink so that overlapping colours appear to blend) and properly registered (exactly positioned with relation to each other), these four plates can accurately reproduce the colours and shadings of original material. In most printmaking processes, illustrations for colour printing must first be subjected to the [halftone process](https://www.britannica.com/technology/halftone-process) (q.v.) in order to render tonal gradations; this may be done either in the same step as the colour separation or separately. Some printing processes—such as conventional [gravure](https://www.britannica.com/technology/gravure-printing) and [collotype](https://www.britannica.com/technology/collotype)—can print varying densities of ink without use of halftones.

Four-colour printing on a two-colour [flatbed press](https://www.britannica.com/technology/flatbed-press) requires that a sheet be passed through the press twice. A sheet-fed [rotary press](https://www.britannica.com/technology/rotary-press) and a web-fed rotary press, the latter of which is fed a continuous length of paper unwinding from a roll, can print four colours in a single pass of the paper, depending on design

<https://www.britannica.com/technology/color-printing>