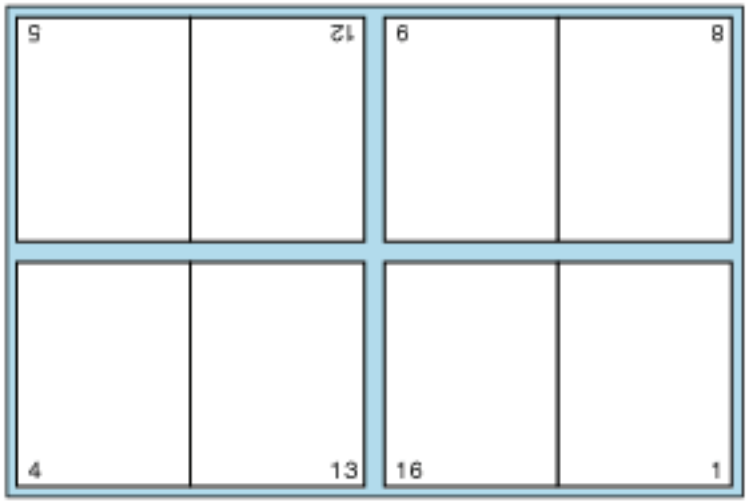
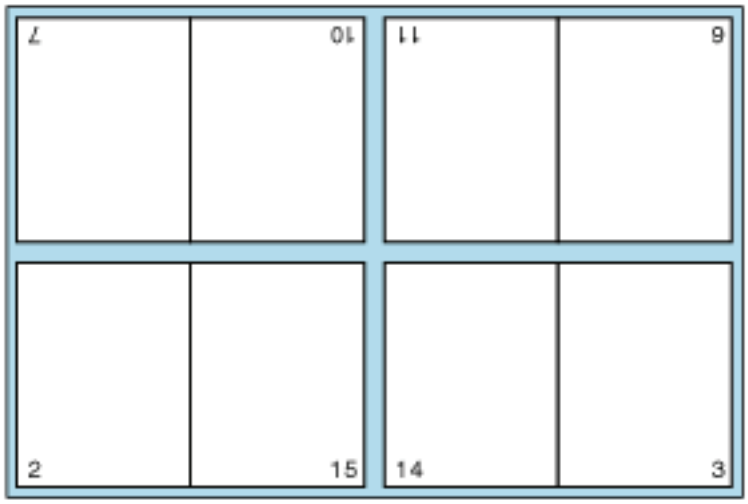
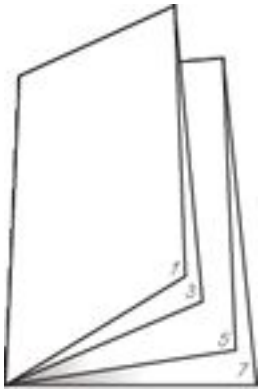
UNDERSTANDING IMPOSITIONS

Printing presses print an entire set of pages on a single large sheet of paper to make the most efficient use of the paper and to shorten the time required for printing a large number of different pages. **Imposition** is the process of arranging the individual pages on the sheet of paper so that after they are printed, folded and trimmed, the resulting pages will back up correctly and be in the proper order. The order in which the pages are placed on the large sheet of paper is referred to as **printers spreads**, as opposed to **readers spreads**, which is the order in which the pages will be read. The pages are arranged on a large sheet called a flat, which is then used to produce the plates. Two forms are printed back to back on a press sheet. That sheet is then folded into a signature. Depending on the size of the page and the size of the paper, signatures are usually 4-, 8-, or 16-pages. The signatures are combined, either by nesting signatures inside each other or stacking one on top of the other, which are then bound to create the publication.

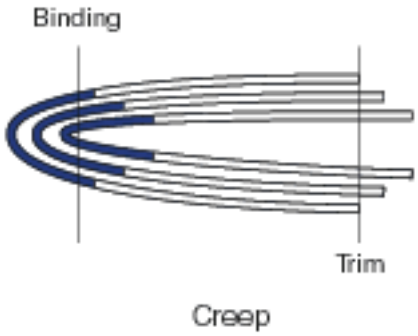






In order to set up your pages correctly, the first step is to create a dummy. A **dummy** is a folded representation of the finished job. To prepare a dummy, fold sheets of paper to obtain the desired number and size of pages, then number them. The odd numbers are always on the right-hand side and the even numbers on the left. Most printers work in 16-page signatures, so the first spread would be pages 16 and 1. It is important to know which page numbers are on which side of the sheet, so if you wish to print color on some pages, you could save money by printing the color only on the pages that are on one side of the sheet.

If the cover of a 16-page publication is to be printed in the same stock as the rest of the publication, it is called a self-cover. The first page will be the outside front cover (OFC), page 2 will be the inside front cover (IFC), page 15 will be the inside back cover (IBC) and page 16 will be the outside back cover (OBC). If the cover is to be printed separately using a heavier stock, then it will be treated as a four-page section. Printing the cover separately makes it 16 pages for the inside and 4 for the cover, making it a 20-page publication.



In addition to placing the pages in the correct position and order, imposition has to compensate for the behavior of the paper when it's folded. The more pages there are in a publication, the more that the inner pages move out from the binding edge compared to the outer pages. The moving out of the inner pages is known as **creep**. To compensate for the creep, the pages are **shingled**, which is the process by which the inner margin or **gutter** is increased on the pages working from the inside of the book to the outside. The gutter gets successively wider page by page. The outside page has the widest gutter and the inside page has the narrowest gutter. Increasing the gutter moves the printed area closer to the outside margin. When the pages are trimmed flush, the printed copy appears to cover the same portion of each page.

UNDERSTANDING IMPOSITIONS *(continued)*

Inserting signatures for saddle-stitching

Gathered signatures for perfect binding

Binding is the process of gathering folded signatures and assembling them. Nested signatures are either left loose, like newspapers, or stapled or **saddle-stitched**, like magazines. Stacked signatures are usually stitched individually into the spine of the book. In **perfect binding**, the signatures are collated, ground off at the spine of the book, and then bound with glue so that each page is individually glued to the spine. The final step for stacked or nested signatures is to trim the three outside edges of the page.

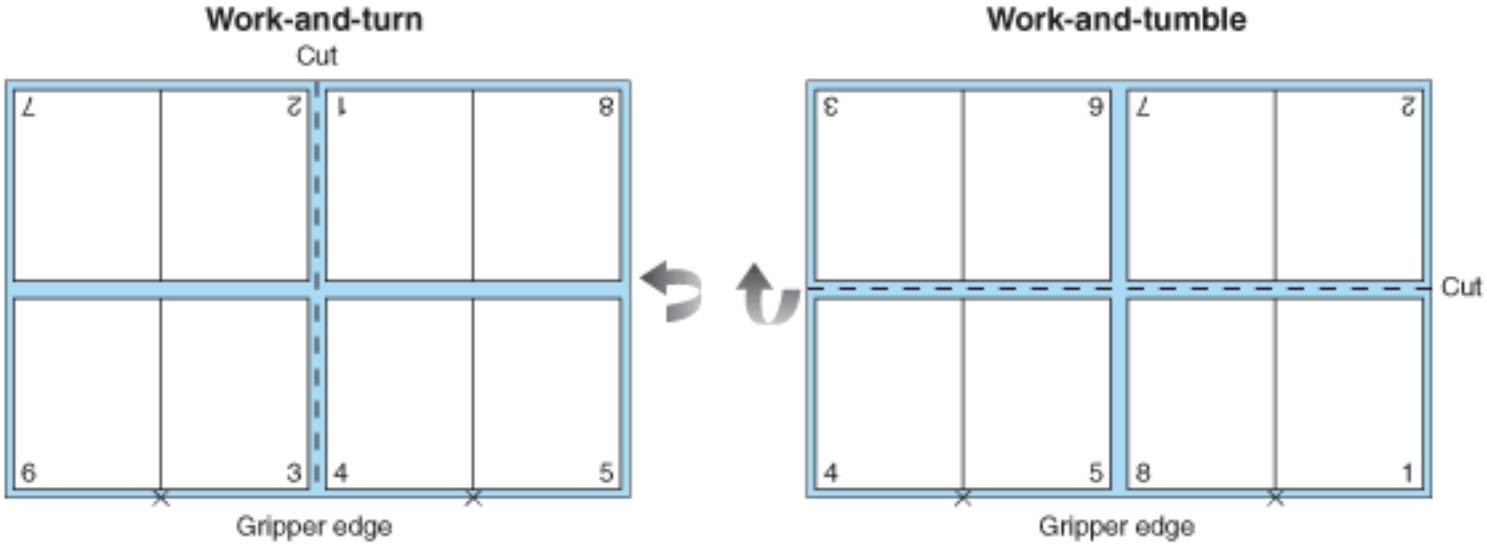
Gripper

The direction of a sheet of paper as it goes through the printing press can affect the layout. The gripper edge is the side of the paper that the press "grabs" in order to pull it through the press. The gripper area differs in width for various sizes and types of presses, but is usually 3/8" to 1/2" deep. It is not possible to print anything in the gripper area so this must be taken into consideration when planning the sheet size. Opposite the gripper edge is the **leave edge**, and the left side of the sheet as it passes through the press is called the **lay edge**.

Work-and-Turn and Work-and-Tumble

Work-and-turn is a technique enabling the use of just one plate. The copy for the pages on one side of a full sheet is put on one half of the plate and the copy for the pages on the other side of the sheet appears on the other half of the plate. The sheet is printed, and then rotated 180° as well as turned over and printed again on the other side. After printing, the sheets are cut in half to yield a double quantity of sheets. If 1,000 sheets were required for the job, only 500 pieces of paper would be required for the run. The gripper edge remains the same.

Work-and-tumble works the same as work-and-turn except the paper is flipped head over heels, and the gripper edge changes ends.



UNDERSTANDING IMPOSITIONS *(continued)*

The work-and-turn and the work-and-tumble options are economical for several reasons. Using only one plate saves both materials and time. For smaller jobs, step-and-repeat (duplicating) can be used to print two-up in one pass through the press to save press time.

Imposition was traditionally created manually, by stripping the negatives for each page onto flats. Today, it can be created electronically using special imposition software and large format imagesetters and platesetters.