Adobe Photoshop

- Selection tools
  - Selection mode options
    - In options bar
    - From left:
      - New
      - Add to (existing selection)
        - Combines new selection areas with existing ones
        - Selections that don't overlap produce multiple selection areas
      - Subtract from (existing selection)
        - Removes new selection areas from existing
        - Selections that don't overlap produce no change
      - Intersect with (existing selection)
        - Creates selection area using overlap between existing and new selection
        - Selections that don't overlap produce no selection
  - Marquee
    - Rectangular
      - makes a rectangular selection
      - hold shift after clicking while dragging for a square selection
      - holding option while dragging centers the selection on the first clicked point
      - feather softens the selection edges by the entered number of pixels
      - anti-alias smooths angled edges
    - Elliptical
      - makes an elliptical selection
      - hold shift after clicking while dragging for a circular selection
      - holding option while dragging centers the selection on the first clicked point
      - feather softens the selection edges by the entered number of pixels
      - anti-alias smooths angled edges
    - Single Column
      - makes a one-pixel wide by the height of the document selection
    - Single Row
      - makes a one-pixel high by the width of the document selection
  - Lasso
    - Regular
      - click and drag to draw a free-form selection
      - feather softens the selection edges by the entered number of pixels
      - anti-alias smooths angled edges
    - Polygonal
      - click to create a selection based on straight line segments
      - feather softens the selection edges by the entered number of pixels
      - anti-alias smooths angled edges
    - Magnetic
      - follows a difference in colors or contrast
      - click, then move the cursor along the edge
      - Photoshop adds points as needed
      - click to add explicit points if needed
      - width controls how far the edge can be from the cursor and be detected
      - edge contrast controls how much difference is required for an edge
      - frequency controls how often anchor points are added
      - feather softens the selection edges by the entered number of pixels
      - anti-alias smooths angled edges
  - Magic Wand
    - click to select similar colored pixels
    - tolerance controls the range of colors
      - 0 = only the clicked color
- 255 = all colors
  - anti-alias smooths angled edges
  - contiguous selects only adjacent pixels
  - sample all layers selects from all layers instead of just the active one
  
  ○ Select > Color Range
  - Click to select target color or use colors in dropdown
  - Fuzziness controls the range of colors selected
  - Eyedropper + to add to selection
  - Eyedropper – to remove from selection
  
  ○ Select > All
  - Command-A
  - selects entire canvas
  
  ○ Select > Deselect
  - Command-D
  - unselects everything
  
  ○ Select > Inverse
  - Command-Shift-I
  - inverts the selected area

- Cut, copy and paste
  
  ○ Cut
  - Removes the selected area and stores it temporarily on the clipboard
  - on a layer – cut area becomes clear
  - on the background layer – cut area becomes the background color
  - Edit > Cut
  - Command-X
  
  ○ Copy
  - Makes a copy of the selected area on the clipboard
  - Edit > Copy
  - Command-C
  
  ○ Paste
  - Pastes the copied/cut information into a new layer
  - Edit > Paste
  - Command-V

- Clone stamp
  
  ○ takes a sample of an image and applies it over another part of the same image by painting
  ○ option-click to select the source point
  ○ click and drag to paint the source image at a different location
  ○ brush controls size and hardness of brush
  ○ mode controls paint blending mode
  ○ opacity adjusts from 0-100%
  ○ aligned mode keeps the brush and sample point aligned even if you release the mouse
  ○ use all layers samples from all visible layers (not just active layer)

- Layer blending modes
  
  ○ determine how the layer's pixels blend with underlying layers in the image
  ○ Normal – layers blend based on opacity (default mode)
  ○ Dissolve – randomly selects the over or underlying pixel based on opacity
  ○ Darken – uses the darker pixel at any given location (base or overlying layer)
  ○ Multiply – multiplies the pixels together, always yields a darker color
    - anything multiplied with black becomes black
    - anything multiplied with white is unchanged
  ○ Color Burn – darkens the base pixel color by increasing the contrast based on the overlying pixel
  ○ Linear Burn – darkens the base pixel color by decreasing the brightness based on the overlying pixel
  ○ Lighten – uses the lighter pixel at any given location (base or overlying layer)
  ○ Screen – multiplies the inverse of the pixels, always yields a lighter color
    - anything screened with white becomes white
    - anything screened with black is unchanged
○ Color Dodge – brightens the base pixel color by decreasing the contrast based on the overlying pixel
○ Linear Dodge – brightens the base pixel color by increasing the brightness based on the overlying pixel
○ Overlay – multiplies or screens depending on the base color. Patterns or colors overlay while retaining the highlights/shadows of base color.
○ Soft Light – darkens or lightens the base color depending on overlying color
  ■ overlying lighter than 50% gray – lightens base color
  ■ overlying darker than 50% gray – darkens base color
○ Hard Light – multiplies or screens the colors based on the overlying color
  ■ overlying lighter than 50% gray – screens base color
  ■ overlying darker than 50% gray – multiplies base color
○ Vivid Light – burns or dodges base color by manipulating contrast depending on the overlying color
  ■ overlying lighter than 50% gray – decreases contrast and lightens base color
  ■ overlying darker than 50% gray – increases contrast and darkens base color
○ Linear Light - burns or dodges base color by manipulating brightness depending on the overlying color
  ■ overlying lighter than 50% gray – increases brightness and lightens base color
  ■ overlying darker than 50% gray – decreases brightness and darkens base color
○ Pin Light – replaces colors depending on the overlying color
  ■ overlying lighter than 50% gray – lighter base pixels unchanged, darker base replaced by overlying
  ■ overlying darker than 50% gray – darker base pixels unchanged, lighter base replaced by overlying
○ Difference – subtracts either the base from overlying color or overlying from base, depending on which has the greater brightness value in each channel
  ■ blend with white – inverts color
  ■ blend with black – no change
○ Exclusion – similar to, but less contrast than Difference mode
  ■ blend with white – inverts color
  ■ blend with black – no change

• Transform
  ○ General
    ■ to commit a transformation
      • click the commit button in options bar (check mark)
      • press enter/return on keyboard
      • double click inside the selected area
    ■ to cancel a transformation
      • click the cancel button in options bar (circle with line through)
      • press esc on keyboard
  ○ Scale
    ■ Change size of selected area
    ■ Edit > Transform > Scale
    ■ Hold shift or click chain in options bar to keep proportional
  ○ Rotate
    ■ Rotate selected area
    ■ Edit > Transform > Rotate
    ■ Fixed 90° increments
      • Edit > Transform > 180°
      • Edit > Transform > 90° CW
      • Edit > Transform > 90° CCW
    ■ Hold shift to constrain to 15° increments of rotation
  ○ Skew
    ■ distorts selected area into a parallelogram
    ■ Edit > Transform > Skew
  ○ Perspective
    ■ distorts selected area into one point perspective
    ■ Edit > Transform > Perspective
  ○ Distort
    ■ freeform distortion of selected area using the bounding box
    ■ Edit > Transform > Distort
○ Flip Horizontal
  ● flips the image left to right
  ● *Edit > Transform > Flip Horizontal*

○ Flip Vertical
  ● flips the image top to bottom
  ● *Edit > Transform > Flip Vertical*

○ Free Transform
  ● Rotate, scale, skew, distort, perspective all in one operation
  ● *Edit > Free Transform*
  ● command-T
  ● modifier keys to perform different operations
    ● drag a transform box handle to scale
      ○ hold shift for proportional scaling
    ● move cursor outside the box (until it becomes a curved double ended arrow) then drag to rotate
      ○ hold shift to constrain rotation to 15° increments
    ● hold command and drag a handle to distort
    ● hold command and shift and drag a side handle to skew
    ● hold command, option and shift and drag a corner handle to apply perspective

○ Move tool/Transform controls
  ● with the move tool selected (top tool in right column), check “show transform controls” in options bar
  ● same functionality as with free transform