[www.ck12.org](http://www.ck12.org/) **Indicators Practice Worksheet**

1. What would be the best indicator to use around pH 1?
   1. Phenol red
   2. Bromocresol purple
   3. Thymol blue
   4. Methyl violet
2. pH indicators are:
   1. Either weak acids or weak bases
   2. Strong acids and strong bases
   3. Salts of weak acids and weak bases
   4. Salts of strong acids and strong base
3. The pH range of methyl yellow is between 7 and 8.8. = *TRUE or FALSE* ?
4. The equilibrium between the protonated and deprotonated form of the indicator bromthymol blue can be shown below, along with the colour of each form.

*HIn(aq) ⇄ H+(aq) + In−(aq)*

(yellow) (blue)

When excess acid is added, the equilibrium shifts to the \_\_\_\_\_ and the colour of the indicator is \_\_\_\_\_.

1. left; yellow
2. right; yellow
3. right; blue
4. left; blue
5. The color change in methyl red lies in pH \_\_\_\_\_.
   1. 4.8 to 6.0
   2. 3.0 to 5.0
   3. 6.4 to 8.2
   4. None of the above
6. Litmus paper is an example of an indicator = *TRUE or FALSE* ?
7. Phenolphthalein and thymolphthalein are indicators used in the titration of a weak acid against a stronger acid

*TRUE or FALSE ?*

1. If the litmus paper turns red, the solution is basic = *TRUE or FALSE ?*
2. For a strong acid-weak base titration, bromothymol blue indicator is used = *TRUE or FALSE ?*
3. Phenol red changes color from pH 3.8 to 5.4 = *TRUE or FALSE ?*

**Answer Keys**

1. Methyl violet
2. Either weak acids or weak bases
3. FALSE
4. left; yellow
5. 4.8 to 6.0
6. TRUE
7. TRUE
8. FALSE
9. FALSE
10. FALS