

# 3-5 pH class worksheet

pH	1	2	3	4	5	6	7	8	9	10	11	12	13
Ind A	Yellow		orange			Red							
Ind B	red	blue								yellow			
Ind C	Blue					green	yellow						
Ind D	red			purple				blue					
Ind E	colorless						blue				dark blue		

- Which indicator would you use to find a strong acid B, a strong base e and a neutral solution? C
- Which indicator would you use to find a weak acid? A
- What color would indicator D give if a substance that has a pH of 5 is used? Purple
- What color would indicator B give if it has a pH of 9? blue
- What is the pH of a substance if it becomes yellow with A and blue with B? 2
- What is the pH of a substance if it becomes dark blue with E and yellow with B? 11-13
- What is the pH of a substance if it becomes purple with D and blue with E? 7
- What is the pH of a substance if it becomes red with A and blue with C? 6
- What is the pH range if indicator A turns orange? 3-5
- What is the pH range if indicator C turns yellow? 7-13

2. A solution that conducts electricity and that turns litmus paper blue

pH Scale	2	3	4	5	6	7	8	9	10	11	12	
Indicator 1	Yellow					Green		Blue				
Indicator 2	Colourless							Pink		Fuchsia		
Indicator 3	Red		Orange			Yellow						
Indicator 4	Red				Orange		Yellow			Green		

The pH of a given solution is unknown. Indicators 1 and 3 turn yellow in this solution. What colour will indicator 4 become in this solution?

3. The following table gives the colours of two acid-base indicators when they are added to solutions with different pH values.

pH Scale	1	3	5	7	9	11	13
Indicator 1	Red	Orange	Yellow				
Indicator 2	Yellow			Green		Blue	

The pH of solution A is 2 and the pH of solution B is 13. What was the colour of solution A and the colour of solution B?

- A) Solution A is red and solution B is yellow.
- B) Solution A is yellow and solution B is blue.
- C) Solution A is orange and solution B is green.
- D) Solution A is red and solution B is blue.

4. In the lab, you are given two acidic solutions. One has a pH value of 5 and the other has a pH value of 6.8. Name the best indicator that would allow you to distinguish between the two solutions?

1) Methyl orange

pH	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	red		Orange					yellow						

2) Bromothymol blue

pH	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Yellow			Green		blue								

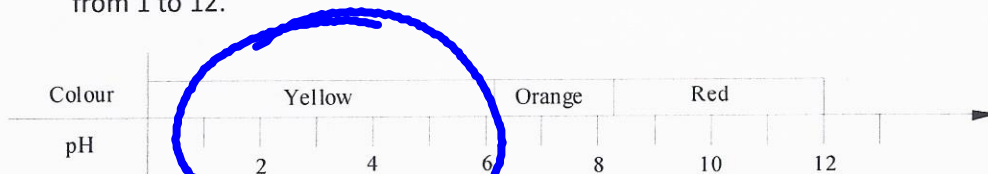
3) Phenolphthalein

pH	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Colourless									pink		dark pink		

4) m-Cresol purple

pH	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Yellow					brown		violet						

5. The table below indicates the colour of the indicator phenol red in solutions with a pH varying from 1 to 12.



A drop of this indicator is added to some lemon juice. What colour is the indicator after being added to the lemon juice?