

Calculating pH from Strong Acids

Questions #1-5: Calculate the pH of each strong acid.

- 1) A $1 \times 10^{-3} M$ solution of HCl.
- 2) 100. mL of a $1 \times 10^{-5} M$ solution of hydrobromic acid.
- 3) 2.00 L of a $3.0 \times 10^{-4} M$ solution of nitric acid.
- 4) A 0.0525 M solution of hydrochloric acid.
- 5) 200. mL of a 0.0100 M solution of HF.

Calculating $[H^+]$ from pH

Questions #6-10: Calculate the $[H^+]$ from each pH value.

- 6) pH = 4.00 of hydrochloric acid.
- 7) HI with a pH of 2.00.
- 8) HNO_3 with a pH of 4.50.
- 9) pH = 2.43 of a strong acid.
- 10) pH = 5.25 of a weak acid.

Calculating pH from Strong Bases

Questions #11-15: Calculate the pH of each strong base.

- 11) A $1 \times 10^{-4} M$ solution of NaOH.
- 12) 250. mL of a 0.0100 M solution of KOH.
- 13) pOH = 3.50 for a strong base.
- 14) A solution of sodium hydroxide with a $[OH^-] = 3.40 \times 10^{-6} M$.
- 15) A strong base with a concentration of $5.83 \times 10^{-3} M$.