Solubility Curves Worksheet

① (a) 142g (f) 38g
(b) 73g (g) 58g
(c) 40g (h) 137g
(d) 100g (i) 23g
(e) 59g (j) 20g

② convert all to 100g of H_2O

A: $\frac{10g}{x} = \frac{50g}{100g}$ $x = 20g$

B: $\frac{20g}{x} = \frac{60g}{100g}$ $x = 33.3g$

C: $\frac{30g}{x} = \frac{120g}{100g}$ $x = 25g$

D: $\frac{40g}{x} = \frac{80g}{100g}$ $x = 50g$

Therefore, salt D is the most soluble at 60°C

③ (a) pressure decreases, less CO_2 can be dissolved, so CO_2 escapes (bubbles out)

(b) as temperature increases, less CO_2 can be dissolved, so CO_2 escapes leaving the the pop "flat"

④ (a) KCl

(b) $\frac{43g\ KCl}{x} = \frac{100g\ H_2O}{200g}$ $x = 86g$

(c) $\frac{10g\ KCl}{x} = \frac{100g\ H_2O}{200g}$ $x = 20g$

so $86 - 20g =$ 66g precipitate out

⑤ water is a polar molecule
since rubbing alcohol dissolves in water, it must also be a polar molecule

(6) (a) graph on next page

(b) $24g - 15g = 9g$ must be added

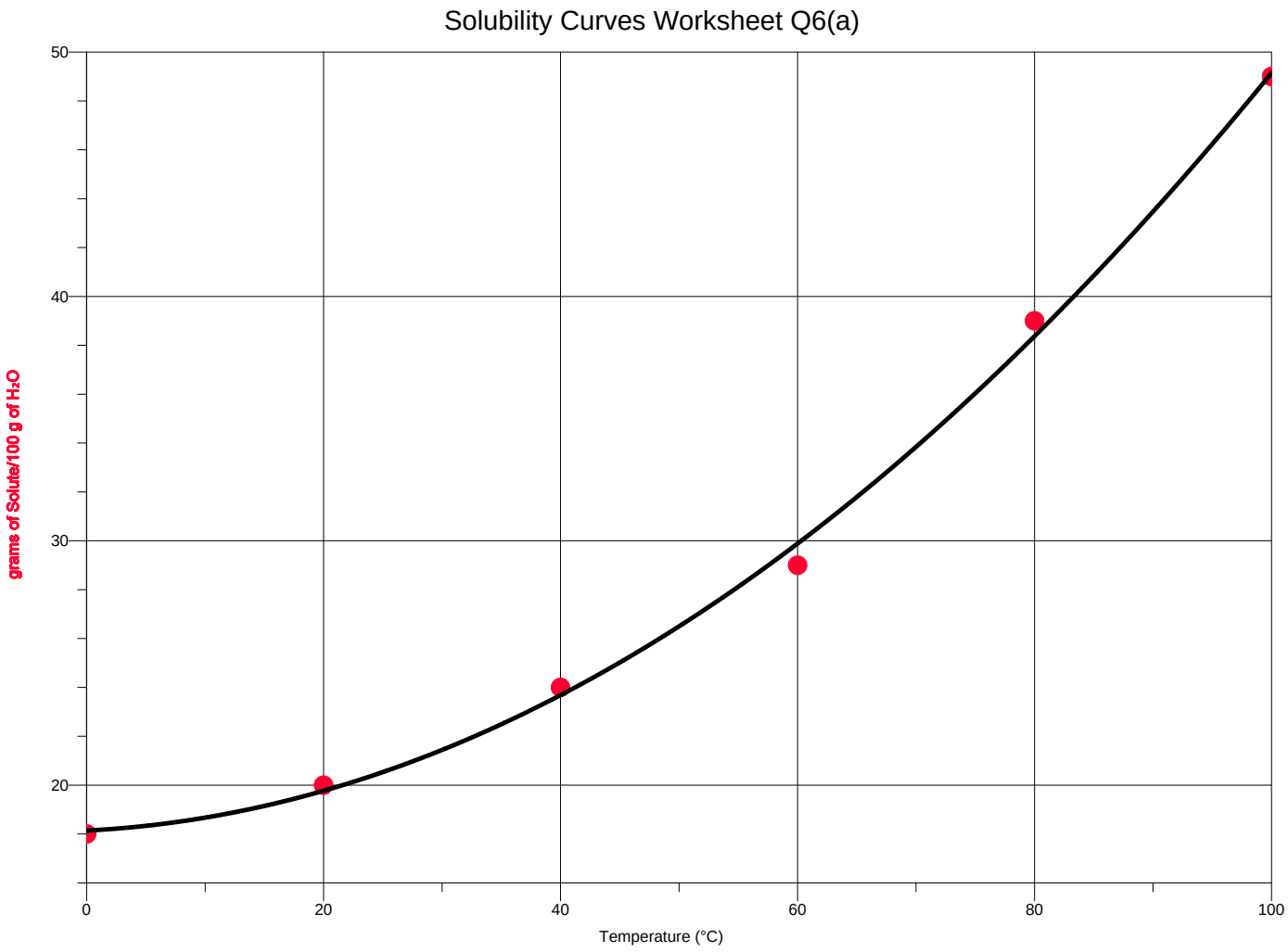
(c) $6g$

(7) at 60°C $123g$ $NaNO_3$ is dissolved.

at 10°C $79g$ $NaNO_3$ can be dissolved.

Therefore, $123 - 79 = \underline{44g \text{ precipitate out}}$

(8) $10g$


Solubility Curves Worksheet Q6(a)
grams of Solute/100 g of H₂O
50
40
30
20
0
20
40
60
80
100
Temperature (°C)