Try yourself 4.6

1) pH of 0.0295 M HNO_3

$$pH = -\log[H^+] = -\log[HNO_3]$$

$$= -\log 0.0295$$

$$pH = 1.53$$

2) pH of 0.040 M NaOH

Remember that this is an alkaline solution, so you can not work out the pH directly. You need to do a conversion.

$$[OH] = 0.040 \, M \qquad \therefore \; pOH = -\log 0.040$$

$$= 1.39$$

$$\therefore \; pH + pOH = 14$$

$$pH = 14 - pOH$$

$$= 14 - 1.39$$

$$= 12.61$$