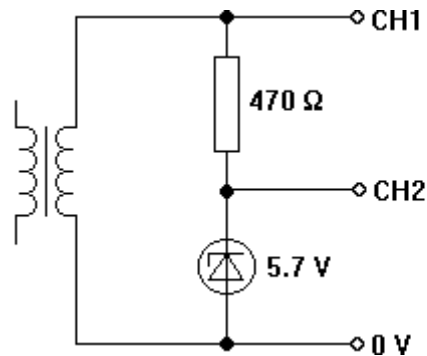
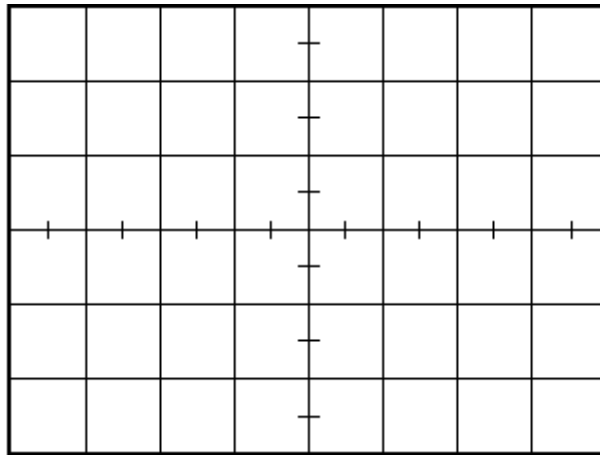


Exploring a zener diode characteristic



1. Assemble the circuit as shown. Use a variable transformer (a.c. power pack) set to 9 V r.m.s. Connect CH1 and CH2 to separate channels of a dual-beam oscilloscope.
2. Set the timebase to 5 ms/cm and the vertical amplifier to 5 V/cm, with 0 V at the centre of the screen. Trigger on CH1.
3. Switch on the variable power pack. Check that the signal at CH1 is a sine wave with a peak value of about 12.5 V. If all is well, the signal at CH2 should not go above +5.7 V or below -0.7 V.
4. Sketch the waveforms at CH1 and CH2. A copy of the grid below might help. Don't forget to show the settings of the timebase and vertical amplifier.



5. Explain the shape of the signal at CH2 by referring to the properties of the zener diode.