

10(a)	speed is (directly) proportional to distance
	speed is speed of recession of galaxy from an observer, and distance is the distance of the galaxy from the observer
10(b)(i)	galaxy is receding from the Earth
	observed wavelength is redshifted from emitted wavelength
10(b)(ii)	$\Delta\lambda / \lambda = v / c$
	$(4.91 - 4.62) / 4.62 = v / (3.00 \times 10^8)$
	$v = 1.9 \times 10^7 \text{ m s}^{-1}$
10(b)(iii)	wavelength (of maximum intensity) is inversely proportional to temperature
	observed wavelength too high, so determined temperature too low
10(c)	$v = H_0 d$
	$d = (1.9 \times 10^7) / (2.3 \times 10^{-18})$
	$= 8.3 \times 10^{24} \text{ m}$