

Hint: Convert to decimal as an intermediate step.

a) Convert $3CB.13_{15}$ to base 8

$$(3 \times 15^2) + (12 \times 15^1) + (11 \times 15^0) + (1 \times 15^{-1}) + (3 \times 15^{-2})$$

$$675 + 180 + 11 + .066 + 0.13 = 866.079_{10}$$

8/866		.079
		x 8
8/108	2	0.632
		x 8
8/13	4	5.056
		x 8
8/1	5	0.448
	1	x 8
		3.584

$$1542.0503_8$$

b) Convert 363.124_7 to base 11

$$(3 \times 7^2) + (6 \times 7) + 3 + (1 \times 7^{-1}) + (2 \times 7^{-2}) + (4 \times 7^{-3})$$

$$147 + 42 + 3 + 0.143 + 0.041 + 0.012 = 192.196_{10}$$

11/192		0.196
		x 11
11/17	5	2.156
		x 11
11/1	6	1.716
	1	x 11
		7.876

$$165.217_{11}$$