CARDS FOR BY THE QUAD

Extend BOQ Drop a perpendicular from C to meet BOQ at R This shows that CR is the height of △s BOC and OCQ	12(9+y) = 18y ∴ 6y = 108 ∴ y = 18
Drop a perpendicular from Q to meet BPA at T This shows that QT is the height of △s BQP and PQA	Area APOQ = (x+y) sq units ∴ Area APOQ = 22 sq units
Drop a perpendicular from P to meet BOQ at S This shows that PS is the height of △s BPO and OPQ	∴ Area △OPQ = 4 square units ∴ x = 4
Drop a perpendicular from C to meet BPA at W This shows that CW is the height of △s BCP and PCA	Since BO:OQ = 2:1 ∴ Area △BPO : Area △OPQ = 2:1

$\therefore$ 12:y = 18:9+y	$\therefore \frac{12}{y} = \frac{18}{(9+y)}$
Let area of $\triangle$ OPQ be x sq units Let area of $\triangle$ PQA = y sq units	Area of $\triangle$ BCO: Area of $\triangle$OCQ is 10:5 $\therefore$ BO:OQ = 10:5 = 2:1
Join PQ	$\therefore$ Area APOQ = (x+y} sq units
Area of $\triangle$ BQP : area of $\triangle$ PQA = 12:y $\therefore$ BP:PA = 12:y	Area $\triangle$BCP : Area $\triangle$PCA = 18:5+x+y = 18:9+y $\therefore$ BP:PA = 18:9+y