

Maths Circle India: Module 8, Session 2
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1 Division

- (a) Let a and b be two positive integers. Show that there are integers q and r such that $b = qa + r$, where $r = 0$ or $0 < r < a$.
- (b) Now let a be a positive integer and b be any integer. Show that there are integers q and r such that $b = qa + r$, where $r = 0$ or $0 < r < a$.
- (c) Now let a and b be two integers where a is negative. Show that there are integers q and r such that $b = qa + r$, where $r = 0$ or $0 < r < -a$.