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**COURSE CODE: MAT 102**

**COURSE TITLE: GENERAL MATHEMATICS III**

**QUESTION**

**1. If A = 4i+j-2k, B = 3i-2j+k and C = i-2k. Find**

**(a) (A-2B)XC**

**(b) AX(2CX3B)**

**2. A = Pi-6j-3k, B = 4i+3j-k and C = i-3j+2k. Find the value of P for which A, B and C are co-planar.**

**SOLUTION**

1. (a) 2B= 6i+4j+2k

A-2B = (4i+j-2k)-(6i-4j+2k)

 = 4i-6i+j+4j-2k-2k

 = -21+5j-4k

(b) 2C= 2i-2k

 3B= 9i-6j+3k

(2C\*3B)= (2i-2k+0j)\*(9i-6j+3k)

 = (18i-6k-0j)

A\*(2C\*3B)=(4i+j-2k)\*(18i-6k-0j)

=72i-0j+12k

 =72i+12k

1. A.B.C=0

(Pi-6j-3k).(4i+3j-k).(i-3j+2k)=0

4p+54+6=0

4p+60=0

4p=-60

P=-15