(1^{st} … rearrange): = 3AX – 12BX + 2AY – 8BY
(2^{nd} … factor term 1): = 3X (A - 4B) + 2AY – 8BY
(3^{rd} … factor term 2): = 3X (A - 4B) + 2Y (A – 4B)
(ANSWER) = (A – 4B) (3X + 2Y)