

It appears that you used the formula for the sum of two cubes instead of the difference. A binomial in the form  $a^3 - b^3$  can be factored as  $(a - b)(a^2 + ab + b^2)$ . Whenever you factor, remember to check your answer by multiplying the factors back together. The correct answer is  $(3x - 4)(9x^2 + 12x + 16)$ .