

## Chapter 8 Test Review

1.) Solve: $y^2 - 8y + 16 = 64$	2.) Solve: $x^2 + 12x + 36 = 25$
3.) Factor: $15b^2 - 24bc$	4.) Factor: $2x^3 + 8x$
5.) Factor: $36x^8 - 60x^4 + 25$	6.) Factor: $45q^3 - 20q$
7.) Factor: $16p^5 - 81p$	8.) Solve: $2m^2 = 32m$
9.) Factor: $36x^2 - 100y^2$	10.) Factor: $j^2 - 9jk - 10k^2$
11.) Simplify: $(k^3 - 2k^2 + 4k + 6) - (-4k + k^2 - 3)$	12.) Simplify: $4x^2(x - 7) - 5x(x^2 - 2x - 2) + 3x(4x - 2)$
13.) Simplify: $(2p + 4q)^2$	14.) Simplify: $(3x - 2y^2)(3x + 2y^2)$
15.) Simplify: $(3y^2 + 2y + 2)(3y^2 - 4y - 5)$	16.) Let $x$ be an even integer. What is the simplified product of the next two consecutive even integers?

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17.) Solve: $18a^2 + 10a = -11a + 4$	18.)Factor: $3a^2 + 30a + 63$
19.)Factor: $12x^3 + 34x^2 - 28x$	20.)Solve: $6b^2 - 5b = 4$
21.)Factor: $10x^2 + 21xy - 10y^2$	22.)Factor: $24c^3 - 84c^2 + 10c - 35$
23.)Factor: $12x^3 + 16x^2 - 3x - 4$	24.)Factor: $12e^4 + 18e^3 + 36e^2 + 54e$
25.)Simplify: $3x(3x^2 - 2x)(6x - 4)$	26.)Simplify: $(2y^2 + 4y - 5)(3y - 4)$
27.)Factor: $32x^5 - 162x$	28.)The length of a Charlotte, NC conservatory garden is 20 yards greater than its width. The area is 300 square yards. What are the dimensions of the garden?
The perimeter of a quadrilateral is $12x^2 - 2x + 15$ cm. Three sides have the following lengths: $2x^2 - 7$ cm, $3x + 4$ cm, $3x^2 - 2x - 11$ cm. What is the length of the fourth side?	