

Palomar College Math Placement Test Study Guide

Intermediate Algebra

Topic 8: Factoring

1. Factor: $4x - 16$
2. Factor: $3a^3b - 6a^2b^2$
3. Factor: $x^2 - 6x + 5$
4. Factor: $4x^2 - 16y^2$
5. Factor: $9x^2 + 12x + 4$
6. Factor: $3x^2 - 6xy - 9y^2$
7. Factor: $2y^2 + 5y - 12$
8. List the factors of $2x^2 - 8x + 6$
9. Factor: $x^3 + 8$
10. Factor: $2t^2 - t - 6$
11. Factor: $8a^2 + 10ab + 2b^2$
12. Factor: $12x^2 - 16x + 5$
13. Factor: $x^6 - 64$
14. Factor: $81y^4 - 72y^2 + 16$
15. Factor: $81x^4 - 9y^4$

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Answers:

1. $4(x - 4)$
2. $3a^2b(a - 2b)$
3. $(x - 5)(x - 1)$
4. $4(x + 2y)(x - 2y)$
5. $(3x + 2)^2$
6. $3(x + y)(x - 3y)$
7. $(y + 4)(2y - 3)$
8. $1, 2, x - 1, x - 3, 2x - 2, 2x - 6, x^2 - 4x + 3, 2x^2 - 8x + 16$
9. $(x + 2)(x^2 - 2x + 4)$
10. $(2t + 3)(t - 2)$
11. $2(4a - b)(a + b)$
12. $(2x - 1)(6x - 5)$
13. $(x + 2)(x - 2)(x^2 - 2x + 4)(x^2 + 2x + 4)$
14. $(3y + 2)^2(3y - 2)^2$
15. $9(3x + y)(3x - y)(9x^2 + y^2)$