

Math 05, Homework 7 on Sections 6.1, 6.2, 6.3, 6.4, 6.6
due Wed, Nov 11.

Write all your working out and answers on a separate sheet. It is very important that you show clearly any work you had to do to get the answer. These first ten questions are 1 point each and **the answers are on page 2.**

- (1) Factor: $100 - x^2$
 - (2) Factor: $2x^2 - 50$
 - (3) Factor: $64y^2 - 9$
 - (4) Factor completely: $100x^2y - 144y^3$
 - (5) Factor: $x^2 + 10x + 16$
 - (6) Factor: $x^2 - 15x + 36$
 - (7) Factor: $2x^2 + 5x + 2$
 - (8) Factor: $3x^2 + 37x + 44$
 - (9) Solve by factoring: $x^2 - 7x - 18 = 0$
 - (10) Solve by factoring: $6x^2 = 7x - 2$
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These next eight questions are 3 points each. Show clearly all your working out and reasoning.

- (11) Factor: $3x^2 - 12$
- (12) Factor: $81y^2 - 121$
- (13) Factor completely: $8x^4 - 50x^2y^4$
- (14) Factor: $x^2 - 6x - 16$
- (15) Factor: $3x^2 + 10x + 3$
- (16) Factor: $3x^2 + x - 4$
- (17) Solve by factoring: $x^2 - x = 12$
- (18) Solve by factoring: $-3x^2 = -147$

Answers to questions (1)-(10):

(1) $(10 + x)(10 - x)$

(2) $2(x + 5)(x - 5)$

(3) $(8y + 3)(8y - 3)$

(4) $4y(5x + 6y)(5x - 6y)$

(5) $(x + 2)(x + 8)$

(6) $(x - 3)(x - 12)$

(7) $(2x + 1)(x + 2)$

(8) $(x + 11)(3x + 4)$

(9) $x = -2$ or $x = 9$

(10) $x = 2/3$ or $x = 1/2$