

Factoring Trinomials – Homework Handout

1. Factor each expression. Show your work and/or reasoning.

a) $x^2 - 5x - 36$

b) $2x^2 + 7x - 30$

c) $4x^2 + 11x - 20$

d) $6x^2 - 11x + 4$

2. Factor each expression. Show your work and/or reasoning.

a) $6x^2 - 13x - 15$

b) $12x^2 - 19x - 18$

c) $8x^2 + 23x + 14$

d) $8x^2 - 38x + 35$

3. Show that $18x^2 + 33x - 15$ cannot be factored over the integers.

Answers:

1. a) $(x - 9)(x + 4)$

b) $(2x - 5)(x + 6)$

c) $(4x - 5)(x + 4)$

d) $(3x - 4)(2x - 1)$

2. a) $(6x + 5)(x - 3)$

b) $(4x - 9)(3x + 2)$

c) $(8x + 7)(x + 2)$

d) $(4x - 5)(2x - 7)$

3. The following table shows that there are no two integers that have a product of -270 and a sum of 33.

Product = -270			Sum =
1	x	-270	-269
2	x	-135	-133
3	x	-90	-87
5	x	-54	-49
6	x	-45	-39
9	x	-30	-21
10	x	-27	-17
15	x	-18	-3