Name: _____ Date: _____

Learning Goal 1.2	Factor trinomials of the form $ax^2 + bx + c$.

Assignment

1. Identify each polynomial as a perfect square trinomial, a difference of squares, or neither.

a. $25 - t^2$ b. $16m^2 + 49n^2$ c. $4x^2 - 24xy + 9y^2$ d. $9m^2 - 24mn + 16n^2$

2. Factor each binomial.

a. $x^2 - 49$ b. $b^2 - 121$ c. $1 - q^2$ d. $36 - c^2$

e. $9d^2 - 16f^2$ f. $25s^2 - 64t^2$ g. $144a^2 - 9b^2$ h. $121m^2 - n^2$

i. $8m^2 - 72n^2$ j. $12x^2 - 27y^2$ k. $-18b^2 + 128c^2$ l. $81a^2b^2 - 1$

3. Factor each trinomial.

a. $a^2 + 10a + 25$ b. $b^2 - 12b + 36$ c. $c^2 + 14c + 49$ d. $d^2 - 16d + 64$

e. $h^2 + 18h + 81$ f. $f^2 - 20f + 100$ g. $4x^2 - 12x + 9$ h. $9 + 30n + 25n^2$

i. $81 - 36v + 4v^2$ j. $25 + 40h + 16h^2$ k. $9g^2 + 48g + 64$ l. $49r^2 - 28r + 4$

m. $4x^2 + 28xy + 49y^2$ n. $16r^2 + 8rt + t^2$ o. $9a^2 - 42ab + 49b^2$ p. $8z^2 + 8yz + 2y^2$

q. $8p^2 + 40pq + 50q^2$ r. $x^4 - 12x^2 + 36$ s. $a^4 - 8a^2b^2 + 16b^4$ t. $y^4 - 4y^2z + 4z^2$

4. Determine the area of the shaded region. Simplify your answer.