

Name _____

12-6A Lesson Master**Questions on SPUR Objectives**

See pages 773–775 for objectives.

PROPERTIES Objective E

1. *Multiple Choice.* If a quadratic polynomial is factorable over the integers, then the discriminant must be ?. _____

A positive

B negative

C an integer

D a perfect square

In 2–5, a quadratic expression is given. Calculate $b^2 - 4ac$ to determine whether the quadratic is factorable over the integers or prime. If possible, factor the expression.

2. $4x^2 - x - 3$

2. _____

3. $3m^2 + 2m + 5$

3. _____

4. $n^2 - 30n + 225$

4. _____

5. $9p^2 - 20$

5. _____

6. Which of the expressions below are factorable over the integers? _____

A $2x^2 + 9x - 5$

C $9x^2 - 25$

B $5x^2 + 10x - 2$

D $x^2 + 5x + 7$

7. If the following numbers are values of discriminants, which would allow
- $ax^2 + bx + c$
- to be factorable over the integers? _____

A 121

D 1

B 55

E 0

C -49

F 8,000