I. FACTORING

1. If $x + y = 8$ and $x - y = 5$, what is the value of $x^2 - y^2$?

2. Both x and y are positive integers. If $(x + y)^2 = 56$ and $xy = 12$, then $x^2 + y^2 = ?$

3. If $ab = 9$ and $a^2 + b^2 = 16$, then $(a + b)^2 = ?$

4. If $ab = 2$ and $a^2 - 2ab + b^2 = 8$, then $(a + b)^2 = ?$

II. FACTORING

1. If $ab = 3$ and $a^2 - 2ab + b^2 = 18$, then $(a + b)^2 = ?$

2. If $x - y = n$ and $x + y = \frac{1}{n}$, $n \neq 0$, then $x^2 - y^2 = ?$

3. Both x and y are positive integers. If $(x + y)^2 = 144$ and $xy = 35$, then $x^2 + y^2 = ?$

4. If $xy = 5$ and $x^2 + y^2 = 12$, then $(x + y)^2 = ?$

III. FACTORING

1. Both a and b are positive integers. If $(a + b)^2 = 165$ and $ab = 55$, then $a^2 + b^2 = ?$

2. If $ab = 3$ and $a^2 + b^2 = 14$, then $(a + b)^2 = ?$

3. If $xy = 4$ and $x^2 - 2xy + y^2 = 21$, then $(x + y)^2 = ?$

4. If $x - y = 8$ and $x + y = 15$, then $x^2 - y^2 = ?$

IV. FACTORING

1. If $xy = 2$ and $x^2 + y^2 = 24$, then $(x + y)^2 = ?$

2. If $a - b = 7$ and $a + b = 13$, then $a^2 - b^2 = ?$

3. Both x and y are positive integers. If $(x + y)^2 = 122$ and $xy = 11$, then $x^2 + y^2 = ?$

4. If $ab = 5$ and $a^2 - 2ab + b^2 = 29$, then $(a + b)^2 = ?$