Practice Exercises on Factoring Trinomials with 1 as Leading Coefficient

A. True or False

Write True if the statement is true or False if it is false. One point each.

1. $x^2 + 7x + 10 = (x + 2)(x + 5)$
2. $x^2 + 2x - 15 = (x + 3)(x - 5)$
3. $x^2 - 5x - 24 = (x + 3)(x - 8)$
4. $x^2 + 9x + 14 = (x - 2)(x - 7)$
5. $x^2 - 5x + 6 = (x - 3)(x - 2)$

B. Factoring Trinomials with 1 as Leading Coefficient

Factor each polynomial completely. Write the final answers only. One point each.

1. $b^2 + 8b + 7$
2. $m^2 + m - 90$
3. $n^2 - 10n + 9$
4. $m^2 + 2m - 24$
5. $k^2 - 13k + 40$
6. $n^2 - n - 56$
7. $b^2 - 6b + 8$
8. $2n^2 + 6n - 108$
9. $2k^2 + 22k + 60$
10. $2p^2 + 2p - 4$

C. Fill in the Blank

Factor each polynomial completely then supply the missing terms. One point each.

1. $n^2 - 11n + 10 = (\_\_\_\_ - 10)(n - 1)$
2. $n^2 + 4n - 12 = (n - 2)(n + \_\_\_\_)$
3. $a^2 + 11a + 18 = (a + 2)(a + \_\_\_\_)$
4. $n^2 - 5n + 6 = (n - \_\_\_\_)(n - 3)$
5. $n^2 + 6n + 8 = (n + 2)(n + \_\_\_\_)$
6. $5n^2 + 25n + 20 = \_\_\_\_(n + 4)(n + 1)$
7. $a^2 - a - 90 = (a - \_\_\_\_)(a + 9)$
8. $4v^2 - 4v - 8 = 4(v + 1)(v - \_\_\_\_)$
9. $v^2 - 7v + 10 = (v - 5)(v - \_\_\_\_)$
10. $6v^2 + 66v + 60 = \_\_\_\_(v + 10)(v + 1)$

Answer Key

A. True or False

1. True
2. False
3. True
4. False
5. True

B. Factoring Trinomials with 1 as Leading Coefficient

1. $b^2 + 8b + 7 = (b + 1)(b + 7)$
2. $m^2 + m - 90 = (m - 9)(m + 10)$
3. $n^2 - 10n + 9 = (n - 9)(n - 1)$
4. $m^2 + 2m - 24 = (m - 4)(m + 6)$
5. $k^2 - 13k + 40 = (k - 8)(k - 5)$
6. $n^2 - n - 56 = (n - 8)(n + 7)$
7. $b^2 - 6b + 8 = (b - 4)(b - 2)$
8. $2n^2 + 6n - 108 = 2(n - 6)(n + 9)$
9. $2k^2 + 22k + 60 = 2(k + 5)(k + 6)$
10. $2p^2 + 2p - 4 = 2(p - 1)(p + 2)$

C. Fill in the Blank

1. n
2. 6
3. 9
4. 2
5. 4
6. 5
7. 10
8. 2
9. 2
10. 6