

**b)**  $x^2 - 13x + 12$

The coefficient of  $x$  is \_\_\_\_\_, so the sum of the factors is \_\_\_\_\_.

The constant term is \_\_\_\_\_, so the product of the factors is \_\_\_\_\_.

| Factors of _____      | Sum of the factors   |
|-----------------------|----------------------|
| $1 \times$ _____      | $1 +$ _____ = _____  |
| $(-1) \times$ (_____) | $-1 -$ _____ = _____ |
| $2 \times$ _____      | $2 +$ _____ = _____  |
| $(-2) \times$ (_____) | $-2 -$ _____ = _____ |
| $3 \times$ _____      | $3 +$ _____ = _____  |
| $(-3) \times$ (_____) | $-3 -$ _____ = _____ |

\_\_\_\_\_ is positive, so both its factors have the same sign. The  $x$ -term is \_\_\_\_\_, so both factors must be \_\_\_\_\_.

Once you have found the sum you need, you don't have to add any more factors.

The factors of \_\_\_\_\_ are \_\_\_\_\_ and \_\_\_\_\_.

So,  $x^2 - 13x + 12 = (x - \text{_____})(x - \text{_____})$

**c)**  $n^2 - 8n - 20$

The sum of the factors is \_\_\_\_\_.

The product of the factors is \_\_\_\_\_.

| Factors of _____ | Sum of the factors |
|------------------|--------------------|
| _____            | _____              |
| _____            | _____              |
| _____            | _____              |
| _____            | _____              |
| _____            | _____              |
| _____            | _____              |

So,  $n^2 - 8n - 20 = \text{_____}$

**d)**  $c^2 + 7c - 18$

| Factors of _____ | Sum of the factors |
|------------------|--------------------|
| _____            | _____              |
| _____            | _____              |
| _____            | _____              |
| _____            | _____              |
| _____            | _____              |
| _____            | _____              |

So,  $c^2 + 7c - 18 = \text{_____}$