Preview 8

PREVIEW

Factor.

1. $x^2 - 11x + 30$

2. $x^2 - 16$

3. $18 - 2x^2$

4. $2x^2 + 15x - 8$

PREVIEW

Factor.

1. $x^2 - 11x + 30$ $\begin{cases} P = 30 \\ S = -11 \end{cases} -5, -6$

$(x-5)(x-6)$

check: $(x-5)(x-6)$
$= x^2 - 6x - 5x + 30$
$= x^2 - 11x + 30$

2. $x^2 - 16$

$\left(\text{perfect square}\right) - \left(\text{perfect square}\right)$
$= (x)^2 - (4)^2$
$= (x+4)(x-4)$

check: $(x+4)(x-4)$
$= x^2 - 4x + 4x - 16$
$= x^2 - 16$

3. $18 - 2x^2$

$= 2(9 - x^2)$
$= 2(3-x)(3+x)$

check: $2(3-x)(3+x)$
$= 2(9 + 3x - 3x - x^2)$
$= 2(9 - x^2)$
$= 18 - 2x^2$

4. $2x^2 + 15x - 8$ $AC = 2 \cdot -8 = -16$

$\begin{cases} P = -16 \\ S = 15 \end{cases} \boxed{16, -1}$

$= 2x^2 + 16x - 1x - 8$
$= 2x(x+8) - 1(x+8)$
$= (x+8)(2x-1)$

check: $(x+8)(2x-1)$
$= 2x^2 - x + 16x - 8$
$= 2x^2 + 15x - 8$