Math 9

Difference of Squares

Find each product.

1) $(x + 8)(x - 8)$

FOIL

$= x^2 - 8x + 8x - 64$

$= x^2 - 64$

2) $(a - 3)(a + 3)$

$= a^2 - 9$

3) $(2k - 7)(2k + 7)$

$= 4k^2 - 49$

4) $(7m + 3)(7m - 3)$

$= 49m^2 - 9$

5) $(8n - 7)(8n + 7)$

$= 64n^2 - 49$

6) $2(5n - 11)(5n + 11)$

$= 2(25n^2 - 121)$

$= 50n^2 - 242$

Factor each completely.

7) $\sqrt{25x^2} - \sqrt{16}$

$= (5x + 4)(5x - 4)$

8) $\sqrt{r^2} - \sqrt{4}$

$(r - 2)(r + 2)$

9) $\sqrt{49p^2} - \sqrt{100}$

$= (7p + 10)(7p - 10)$

10) $\sqrt{x^2} - \sqrt{1}$

$= (x + 1)(x - 1)$

11) $\frac{200b^2}{2} - \frac{98}{2}$

$= 2(\sqrt{100b^2} - \sqrt{49})$

$= 2(10b - 7)(10b + 7)$

12) $\frac{27x^3}{3x} - \frac{12x}{3x}$

$= 3x(\sqrt{9x^2} - \sqrt{4})$

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

13) $r^2 + 9$

cannot factor

needs to be a minus

14) $\sqrt{16k^2} - \sqrt{41}$

cannot square root 41

cannot factor.