

Algebra 1 H Simplifying Radicals/Completing the Square

Simplify.

1) $\frac{2\sqrt{3}}{3\sqrt{5}}$

2) $\frac{-5 - 4\sqrt{5}}{\sqrt{2}}$

3) $\frac{5\sqrt{5}}{2\sqrt{2} + \sqrt{3}}$

4) $\frac{5}{\sqrt{5} + 4}$

Find the value of c that makes each expression a perfect square trinomial. Then, write the expression as a perfect square binomial. Please draw a circle or a box around your c value as well as your squared binomial.

5) $x^2 - 10x + c$

6) $x^2 - 9x + c$

7) $y^2 - 22y + c$

8) $n^2 - 3n + c$

Solve each equation by completing the square. Please draw a circle or a box around your solutions.

9) $r^2 + 14r + 48 = 0$

10) $k^2 - 8k + 12 = 0$

11) $r^2 + 14r - 51 = 0$

12) $n^2 + 14n + 45 = 0$

13) $7m^2 + 14m - 56 = 0$

14) $2m^2 + 8m - 10 = 0$

15) $4v^2 + 8v - 77 = 0$

16) $2x^2 + 16x - 96 = 0$