

Solving quadratic equations by factoring and completing the square

No. _____

Solve each equation by factoring.

1) $8n^2 - 6 = 13n$

- A) $\left\{-\frac{1}{7}, -2\right\}$ B) $\left\{-\frac{3}{8}, 2\right\}$
 C) $\left\{\frac{8}{7}, 3\right\}$ D) $\left\{\frac{5}{2}, 0\right\}$

3) $7b^2 - 17b = -6$

- A) $\left\{\frac{7}{5}, -7\right\}$ B) $\left\{\frac{3}{7}, 2\right\}$
 C) $\left\{-\frac{3}{2}, -1\right\}$ D) $\left\{\frac{1}{8}, 5\right\}$

5) $7v^2 = 5v$

- A) $\left\{-\frac{2}{3}, 8\right\}$ B) $\left\{-\frac{3}{7}, \frac{1}{5}\right\}$
 C) $\left\{\frac{5}{7}, 0\right\}$ D) $\left\{-\frac{5}{3}, 1\right\}$

2) $14x^2 + 29x = 15$

- A) $\left\{-\frac{5}{2}, \frac{3}{7}\right\}$ B) $\left\{\frac{3}{8}, 5\right\}$
 C) $\left\{-\frac{3}{5}, \frac{4}{7}\right\}$ D) $\left\{-\frac{2}{3}, 3\right\}$

4) $42x^2 + 168 = 318x$

- A) $\left\{-\frac{1}{4}, 5\right\}$ B) $\left\{\frac{4}{7}, 7\right\}$
 C) $\left\{\frac{3}{7}, 7\right\}$ D) $\left\{\frac{6}{7}, -7\right\}$

Find the value of c that completes the square.

6) $p^2 - \frac{9}{10}p + c$

- A) $\frac{169}{4}$ B) $\frac{81}{100}$
 C) $\frac{81}{4}$ D) $\frac{81}{400}$

8) $x^2 - 19x + c$

- A) $\frac{9}{4}$ B) $-\frac{361}{4}$
 C) $\frac{361}{4}$ D) $-\frac{19}{2}$

10) $r^2 + 9r + c$

- A) $\frac{25}{1296}$ B) $\frac{9}{2}$
 C) $\frac{169}{4}$ D) $\frac{81}{4}$

7) $x^2 + \frac{124}{19}x + c$

- A) $\frac{3844}{361}$ B) $\frac{62}{19}$
 C) $\frac{9}{4}$ D) $-\frac{3844}{361}$

9) $y^2 - 11y + c$

- A) $\frac{121}{4}$ B) $\frac{1}{4}$
 C) $-\frac{11}{2}$ D) $\frac{81}{4}$

Solve each equation by completing the square.

11) $p^2 + 18p + 30 = -2$

13) $5x^2 + 20x - 56 = 4$

15) $10p^2 + 20p - 88 = -8$

12) $10n^2 + 20n - 65 = 4$

14) $x^2 + 18x - 55 = 8$