Name: _____

Completing the Square

MS3

Solve each quadratic equation by completing the square.

1) $q^2 + q - \frac{3}{2} = 0$

2) $\frac{2}{3}z^2 - 2z = -5$

3) $2(2k^2 + 1$ [illegible] $- 4 = 0$

5) $\frac{3}{4}p^2 + \frac{1}{2}$ [illegible] $= -13r$

7) $3n^2 - 5 = 14n$

8) $5x^2 = -3x - 5$

Name: _____

Answer key

Completing the Square

MS3

Solve each quadratic equation by completing the square.

1) $q^2 + q - \frac{3}{2} = 0$

$q = \frac{-1 \pm \sqrt{7}}{2}$

2) $\frac{2}{3}z^2 - 2z = -5$

$z = \frac{3 \pm \sqrt{21}i}{2}$

3) $2(2k^2 + 1$ … $n - 4 = 0$

$k = \frac{1}{4}$; k … **; $m = \frac{4}{9}$**

5) $\frac{3}{4}p^2 + \frac{1}{2}$ … $= -13r$

$p = -1$; p … **$r = -\frac{3}{7}$**

7) $3n^2 - 5 = 14n$

$n = -\frac{1}{3}$; $n = 5$

8) $5x^2 = -3x - 5$

$x = \frac{-3 \pm \sqrt{91}i}{10}$