Bellwork Alg 2A Tuesday, March 7, 2017

Find all exact real solutions to each quadratic equation by factoring or using square roots.

1. $8x^2 - 15 = 14x$

2. $7x^2 + 8 = 372$

3. $12x^2 + 19x = x$

4. $3(x+7)^2 - 1 = 74$

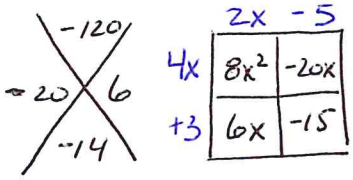
5. $10 - 2x^2 + 6 = x^2 + 31$

Bellwork Alg 2A Tuesday, March 7, 2017 — Answers

Find all exact real solutions to each quadratic equation by factoring or using square roots.

1. $8x^2 - 15 = 14x$ FACTOR

$8x^2 - 14x - 15 = 0$



$(2x-5)(4x+3)=0$

$x = 5/2, -3/4$

2. $7x^2 + 8 = 372$ SQ. ROOTS

$7x^2 = 364$

$\sqrt{x^2} = \sqrt{52} = \sqrt{4 \cdot 13}$

$x = \pm 2\sqrt{13}$

3. $12x^2 + 19x = x$ FACTOR

$12x^2 + 18x = 0$

$6x(2x+3)=0$

$x = 0, -3/2$

4. $3(x+7)^2 - 1 = 74$ SQ. ROOTS

$3(x+7)^2 = 75$

$\sqrt{(x+7)^2} = \sqrt{25}$

$x+7 = \pm$

$x = \begin{cases} +5-7 \\ -5-7 \end{cases}$

$x = -12, -2$

5. $10 - 2x^2 + 6 = x^2 + 31$ SQ ROOTS

$16 = 3x^2 + 31$

$-15 = 3x^2$

$-5 = x^2$

NO REAL SOL