Ready, Set, Go!

Ready

Topic: Rational Exponents Review and methods for solving quadratics

Write each exponential expression in radical form.

1.
$$10^{\frac{3}{2}}$$

2.
$$x^{\frac{1}{5}}$$

3.
$$3n^{\frac{1}{3}}$$

4.
$$6^{\frac{2}{7}}$$

5.
$$7^{\frac{5}{3}}$$

6.
$$t^{\frac{4}{5}}$$

Write each radical expression in exponential form.

7.
$$\left(\sqrt[5]{3}\right)$$

8.
$$\left(\sqrt[6]{7a}\right)^5$$

9.
$$\sqrt{x^3}$$

10.
$$\sqrt[3]{n^5}$$

11.
$$\left(\sqrt[y]{n}\right)^x$$

12.
$$\sqrt[p]{n^q}$$

Explain each strategy for solving systems of equations and explain the circumstances in which the strategy is most efficient.

13.
Graphing

14.
Factoring

15.
Completing the square

16. What other strategies do you know for solving quadratic equations? When would you use them?

Set

Topic: Solving systems with three unknowns.

Solve the system of equations using matrices. Create a matrix equation for the system of equations that can be used to find the solution. Then find the inverse matrix and use it to solve the system.

17. $\begin{cases} 2x - 4y + z = \\ 5x - 4y - 5 = 12 \\ 4x + 4y + z = 240 \end{cases}$

18. $\begin{cases} x + 2y + 5z = -15 \\ x + y - 4z = 12 \\ x - 6y + 4z = -122 \end{cases}$

19. $\begin{cases} 4p + q - 2r = 5 \\ -3p - 3q - 4r = -16 \\ 4p - 4q + 4r = -4 \end{cases}$

20. $\begin{cases} -6x - 4y + z = -20 \\ -3x - y - 3z = -8 \\ -5x = 3y + 6z = -4 \end{cases}$

Go

Topic: Solving Quadratics

Solve each of the quadratics below using an appropriate and efficient method.

21.
$$x^2 - 5x = -6$$

22.
$$3x^2 - 5 = 0$$

23.
$$5x^2 - 10 = 0$$

24.
$$x^2 + 1x - 30 = 0$$

25.
$$x^2 + 2x = 48$$

26.
$$x^2 - 3x = 0$$