

AGENDA

- 1) Take out HW to be checked
(*Stations 3 and 4 worksheets*)
- 2) DO NOW
- 3) HW questions??
- 4) Solving for ROOTS w/ Square roots
- 5) Square Root Museum

HW: "Solve for the ROOTS with Square Roots" worksheet
QUIZ Friday

DO NOW

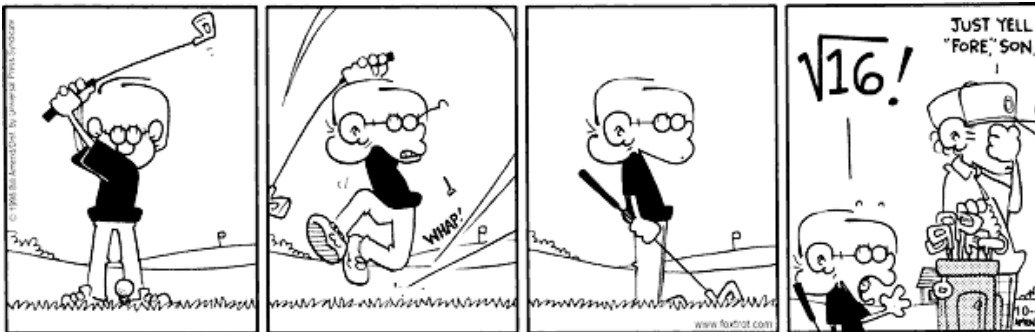
Solve using square roots

1) $k^2 = 16$

2) $a^2 = 4$

3) $m^2 + 7 = 88$

4) $-5x^2 = -500$



Remember: $\sqrt{9} = \underline{\hspace{1cm}}$ or $\underline{\hspace{1cm}}$ (or simply $\underline{\hspace{1cm}}$)

A more simple method to solve for the **root(s)**:
Isolate x^2 and take the **square root** of both sides!

$$1) x^2 - 25 = 0$$

$$2) 3x^2 - 27 = 0$$

$$3) (x - 2)^2 = 9$$

$$4) (x - 4)^2 + 3 = 147$$

$$5) 9(x - 2)^2 = 9$$

$$6) -9(x)^2 = 81$$

***HW: "Solve for the ROOTS with Square Roots" worksheet
QUIZ FRIDAY***

HW: "Solve for the ROOTS with Square Roots" worksheet**Solve each equation by taking square roots.**

1) $k^2 = 76$

2) $k^2 = 16$

3) $x^2 = 21$

4) $a^2 = 4$

5) $x^2 + 8 = 28$

6) $2n^2 = -144$

7) $-6m^2 = -414$

8) $7x^2 = -21$

9) $m^2 + 7 = 88$

10) $-5x^2 = -500$

11) $-7n^2 = -448$

12) $-2k^2 = -162$

13) $x^2 - 5 = 73$

14) $16n^2 = 49$

Optional Review Worksheet

Math 518 Review for Quadratic Quiz:

Name: _____

A) Are the following functions quadratic? **If so**, tell what a, b, and c are, and tell if it opens up or down.

1) $f(x) = 3x^2 - 5x + 2$ Quadratic? _____ a: _____ b: _____ c: _____ Up or Down? _____	2) $g(x) = 4x - 3 + 2x$ Quadratic? _____ a: _____ b: _____ c: _____ Up or Down? _____	3) $h(x) = -x^2 + 2x$ Quadratic? _____ a: _____ b: _____ c: _____ Up or Down? _____
4) $a(x) = 2x^3 - 4x + 2$ Quadratic? _____ a: _____ b: _____ c: _____ Up or Down? _____	5) $b(x) = -3x + x^2 - 4$ Quadratic? _____ a: _____ b: _____ c: _____ Up or Down? _____	6) $c(x) = 7 + 2x^2$ Quadratic? _____ a: _____ b: _____ c: _____ Up or Down? _____

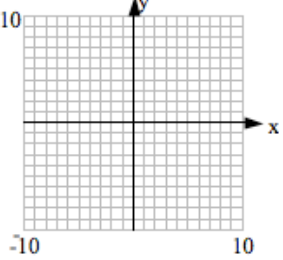
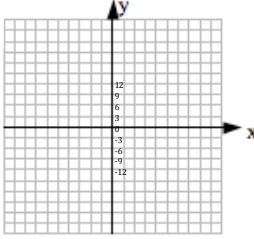
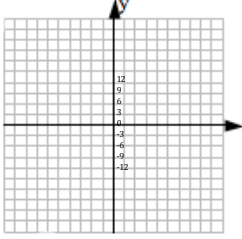
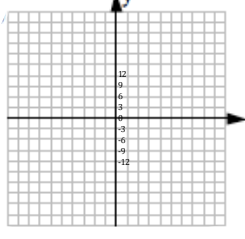
B) Solve the following equations for X (don't forget to show ALL steps)

1) $x^2 = 81$	2) $x^2 = 90$	3) $\frac{1}{2}x^2 = 20$
4) $2x^2 + 7 = 79$	5) $(x + 3)^2 = 49$	6) $(2x - 1)^2 = 25$
7) $3(x - 4)^2 = 60$	8) $5(x^2 - 4) = 200$	9) $\frac{1}{3}(2x - 5)^2 = 18$

C) Given the following quadratic equations:

Identify and Graph the Y-INTERCEPT, ROOTS, AXIS of SYMMETRY, and VERTEX

12
9
6
3
0
-3
-6
-9
-12

<p>1) $f(x) = x^2 - 4x$</p> <p>y – intercept: (_____, _____)</p> <p>roots: (_____, _____) (_____, _____)</p> <p>Axis of Symmetry: $x =$ _____</p> <p>Vertex: (_____, _____)</p> 	<p>2) $g(x) = -x^2 + 8x - 9$</p> <p>y – intercept: (_____, _____)</p> <p>roots: (_____, _____) (_____, _____)</p> <p>Axis of Symmetry: $x =$ _____</p> <p>Vertex: (_____, _____)</p> 
<p>3) $m(x) = x^2 + 3x - 28$</p> <p>y – intercept: (_____, _____)</p> <p>roots: (_____, _____) (_____, _____)</p> <p>Axis of Symmetry: $x =$ _____</p> <p>Vertex: (_____, _____)</p> 	<p>4) $n(x) = -x^2 + 10x - 25$</p> <p>y – intercept: (_____, _____)</p> <p>roots: (_____, _____) (_____, _____)</p> <p>Axis of Symmetry: $x =$ _____</p> <p>Vertex: (_____, _____)</p> 

D) Use the Zero-Product Property to solve for x

1) $(x - 3)(x + 7) = 0$	2) $(2x - 8)(3x + 1) = 0$	3) $2x(x + 10) = 0$
4) $x^2 + 7x + 12 = 0$	5) $x^2 + 3x - 40 = 0$	6) $x^2 - 49 = 0$