2B It's Rad 2B Square

Name: _____ Per: _____

SHOW YOUR WORK. IN PENCIL ONLY.

Objectives: Solve basic equations including exponents. Simplify square roots. Due: Sept 18th / Sept 19th

1. Use the value of $3\ and\ -3$ to illustrate the similarities and differences between the three expressions:

$-a^2$	$(-a)^2$	a^2

Evaluate the following expressions (plug in the numbers) if $a = 4,\ b = -2, and\ c = 8$.

2. $3(a^2 + b) - ac$

3. $\frac{a}{b} + c^2(a - b)$

4. $\frac{a}{b} + c^2(a + b)$

5. $a^2 + b^2 + (-c)^2$

6. $a^2 + (b + c)^2$

7. $a^2 + b^2 + -c^2$

Write the following square roots with the lowest possible integer radicand. MUST SHOW WORK.

8. $\sqrt{81}$

9. $\sqrt{50}$

10. $\sqrt{100}$

11. $\sqrt{75}$

12. $\sqrt{-25}$

13. $\sqrt{25}$

14. $\sqrt{8}$

15. $\sqrt{49}$

16. $\sqrt{64}$

17. $\sqrt{40}$

18. $\sqrt{99}$

19. $\sqrt{63}$

Solve each equation for y and check your answer. Give exact answers with the lowest integer radicand.

20. $5y^2 = 2(12 + y^2)$

21. $2(y^2 + 1) = 10$

22. $3y^2 - y - 12 = -y + 24$

Solve each equation for x and check your answers.

23. $5(x^2 + 4) = 5 + 6x^2$ ✓

24. $2(x^2 + 2) = 8 - 2x^2$ ✓

Solve the equation for the given variable and justify your steps using as many lines as needed.

EX: Solve for *t* and describe your steps:

$d = rt + s$	Given
$-s = -s$	Reflexive Property
$d - s = rt$	Additive Property of Equality
$\div r = \div r$	Reflexive Property
$\frac{d-s}{r} = t$	Multiplicative Property of Equality

25. Solve for *m* and describe your steps:

$z = 3(r + m^2)$

26. Solve for *f* and describe your steps:

$s = 3f^2 - 24$

27. Solve for *t* and describe your steps:

$h - r = 16t + r$

28. Solve for *w* and describe your steps:

$A = 2l + 2w$

29. Solve for *t* and describe your steps:

$h = 8t^2 - q$

Solve the following:

30. $3x^3 = 24$

31. $x^3 = 81$

32. $2x^3 + 5 = 53$

33. The Westlake Golf Team rents time at the local golf course for $250 for the day. The course charges an additional $15 for each player that shows up to practice.

a. Define your variables.

b. Write an equation to show how much the team will pay to practice at the local golf course.

c. If 12 players come to practice, how much will they need to pay? _____

d. What if the team paid $520, how many players came to practice? _____