

2R Review (More Practice)

Name: _____ Per: _____

SHOW YOUR WORK ONLY IN PENCIL. NO WORK NO CREDIT.

1. Simplify the following roots. Give exact answers. No decimals. No calculators.

a. $\sqrt{48}$

b. $\sqrt{140}$

c. $\sqrt{150}$

d. $\sqrt{86}$

2. Solve the following absolute value equation.

a. $3|x - 6| = 9$

b. $|2k + 1| + 3 = 10$

c. $\frac{1}{2}|7 + 2m| + 3 = 7$

3. Solve the following.

a. $3\sqrt{x - 6} = 9$

b. $\sqrt{2k + 1} + 3 = 10$

c. $\frac{1}{2}\sqrt{7 + 2m} + 3 = 7$

Solve each equation and then check your answers.

4. $2(2x^2 - 3) - 8 = 4 + 2x$ ✓

6. $3n^3 - 4 = 2(6 + n^3)$ ✓

5. $-18 - 6k^2 = 6(-18 + 3k^2)$ ✓

7. $5n^2 + 34 = -2(1 - 7n^2)$ ✓

Solve for the given variable in the following equations

8. Solve for b: $7(b^2 + 3) = 28$

11. Solve for a: $8(n + 5) = 4a$

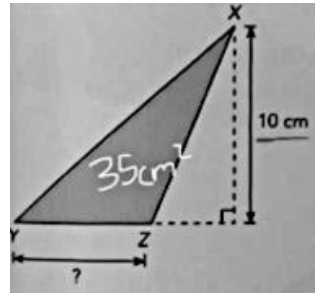
9. Solve for s: $24t + 5s = -3s + 12$

12. Solve for b: $4b^2 + 2(a + 2) = 8$

10. Solve for m: $-1 + 16m - 5n = 19 + m$

13. Solve for x: $2(x + y) - 12 = 8x + 12$

14. $A = \frac{1}{2}bh$ This is the equation for: _____ where
 h represents _____ and b represents _____
 a. If you know that the area of the triangle is 35cm^2 and the height is 10cm.
 Solve for h and find the height.



b. Solve for b in the given equation.

15. $V = \pi r^2 h$ This is the equation for: _____ where h represents _____
 and r represents _____
 a. Re-arrange to solve for h
 b. Solve for r

Solve for x showing your work to the left. Explain your steps to the right. Leave as exact.

16. $2(y + 3) = 8 + 4(x - 6)$ GIVEN

17. $-2(x^2 - 10) = -4 - x^2$ GIVEN

Write an equation and solve to answer the question.

18. Twice a number, decreased by twenty-nine is the same as seven. What is the number?
19. Thirty-two is three times a number increased by eight. What is the number?
20. Greg's motorcycle shop has ATV and motorcycles. He has a total of 45 vehicles all together. Define your variables. _____ Write an equation. _____
21. Fred's motorcycle shop has ATV (4 wheels) and motorcycles (2 wheels). He has a total of 130 wheels. Using the variables from above, write an equation. _____
22. Sam sold half of his books and then bought 8 more. Write an expression _____
 a. He now has a total of 16. Change your expression to an equation _____
 b. Find how many books he began with. _____
23. Oceanside Bike Rental Shop charges 13 dollars plus 8 dollars an hour for renting a bike.
 a. Define your variables. _____
 b. Write the equation. _____
 c. Dan paid \$53 to rent a bike, how many hours did he pay to have the bike checked out? _____

E.C. The sum of the digits of a certain two-digit number is 7. Reversing its digits increases the number by 9. What is the number?