

Name: _____ Period: _____ Score: _____ / _____ = _____ % = _____

HW 6-8 - Operations with Roots

DO NOT USE A SCIENTIFIC CALCULATOR ON THIS ASSIGNMENT!

Simplify each expression.

1. $10\sqrt{27} = 30\sqrt{3}$

8. $4\sqrt{6} + 11\sqrt{7} - 3\sqrt{6} + 2\sqrt{7}$

2. $6\sqrt{18}$

9. $2\sqrt{20} - 3\sqrt{24}$

$4\sqrt{5} - 6\sqrt{6}$

3. $9\sqrt{75} = 45\sqrt{3}$

10. $6\sqrt{50} + 4\sqrt{32}$

4. $5\sqrt{13} + \sqrt{13}$

11. $\sqrt{6} \cdot \sqrt{3}$

$3\sqrt{2}$

5. $7\sqrt{2} - 15\sqrt{2} + 8\sqrt{2}$

12. $\sqrt{10} \cdot \sqrt{35}$

0

6. $8\sqrt{11} - \sqrt{11}$

13. $2\sqrt{10} \cdot 3\sqrt{14}$

$12\sqrt{35}$

7. $13\sqrt{5} + \sqrt{5} - 4\sqrt{5}$

14. $5\sqrt{2} \cdot 2\sqrt{6}$

$10\sqrt{5}$

Simplify each expression.

15. $\sqrt{2} \cdot \sqrt{14} = 2\sqrt{7}$

16. $\frac{\sqrt{15}}{\sqrt{3}}$

17. $\frac{\sqrt{14}}{\sqrt{7}} = \sqrt{2}$

18. $\frac{\sqrt{24}}{\sqrt{3}}$

19. $\frac{\sqrt{45}}{\sqrt{5}} = 3$

20. $\frac{\sqrt{40}}{\sqrt{2}}$

Solve:

21. $8 - 5(2x - 6) = -6x + 9$

$x = \frac{29}{4}$

22. $\frac{3x - 14}{5} = 8$

Add, subtract, multiply or divide. Write your answer in scientific notation.

23. $(1.2 \times 10^{-9})(5.4 \times 10^5)$

6.48×10^{-4}

25. $(8.3 \times 10^{-7}) + (9.7 \times 10^{-9})$

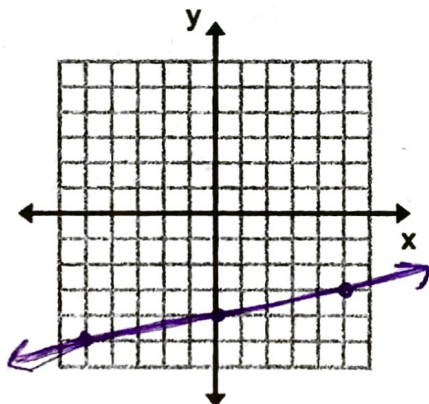
8.397×10^{-7}

24. $(7.93 \times 10^6) - (1.9 \times 10^5)$

26. $(1.24 \times 10^5) + (3 \times 10^{13})$

Graph the following.

27. $y = \frac{x}{5} - 4$



28. $3x - 5y = 15$

