

Kerry Ojakian's MTH 28 Class
Class Assignment #16

1. Perform the operation and simplify:

$$\sqrt{\frac{8y^5x^6}{z^{12}x^4}}$$

2. Perform the operation and simplify: $\frac{5}{\sqrt{3y}}$
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3. Simplify $\frac{10ab}{\sqrt{8ab}}$
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4. Perform the indicated operations and simplify.

(a) $5\sqrt{8} + 3\sqrt{12} + \sqrt{50}$

(b) $10\sqrt[3]{16} - 3\sqrt[3]{54}$

5. Simplify.

(a) $5\sqrt{2} - 3\sqrt{2}$

(b) $6\sqrt[3]{6} + 7\sqrt[3]{6}$

6. Simplify.

(a) $-12\sqrt[5]{18} + 7\sqrt[5]{18}$

(b) $4\sqrt[3]{5} - 6\sqrt{5}$

7. Simplify.

(a) $3\sqrt{2x} + 5\sqrt{2x}$

(b) $-5\sqrt[3]{5x^2} + 7\sqrt[3]{5x^2}$

8. Simplify.

(a) $-4\sqrt[4]{7xy^2} + 5\sqrt[4]{7xy^2}$

(b) $4\sqrt[3]{10x^2} - 6\sqrt[3]{10x}$

9. Simplify.

(a) $\sqrt{27} + \sqrt{75}$

(b) $\sqrt[3]{24} - \sqrt[3]{81}$

10. Simplify.

(a) $\sqrt{72} + \sqrt{98}$

(b) $4\sqrt{45} - \sqrt{80}$

11. Simplify.

(a) $\sqrt{72x^5} - \sqrt{50x^5}$

(b) $\sqrt[3]{64x^6} - 3\sqrt[3]{125x^6}$

12. Simplify.

(a) $\sqrt{48x^5} + \sqrt{75x^5}$

(b) $4\sqrt[4]{243y^6} + 2\sqrt[4]{3y^6}$

13. Perform the operation and simplify: $(\sqrt{2})^2 + (\sqrt{6})^2$

14. Simplify $\frac{2\sqrt{10}}{1 + \sqrt{6}}$

15. Perform the operation and simplify: $(\sqrt{2} + \sqrt{6})^2$

16. Perform the indicated operations and simplify:

(a) $(\sqrt{2} + \sqrt{3})^2$

(b) $\frac{6}{2 + \sqrt{5}}$

17. Simplify.

(a) $\sqrt{7}(5 + 2\sqrt{7})$

(b) $\sqrt[3]{6}(4 + 2\sqrt[3]{18})$

18. Simplify.

(a) $\sqrt[4]{2}(\sqrt[4]{12} + \sqrt[4]{24})$

(b) $\sqrt{2}(-5 + 9\sqrt{2})$

19. Simplify.

(a) $(7 + \sqrt{3})(9 - \sqrt{3})$

(b) $(7 + \sqrt[3]{6})(4 + 2\sqrt[3]{18})$

20. Simplify.

(a) $(\sqrt{3} + \sqrt{10})(\sqrt{3} + 2\sqrt{10})$

(b) $(2\sqrt{7} - 5\sqrt{11})(4\sqrt{7} + 9\sqrt{11})$

21. Simplify.

(a) $(\sqrt{11} + \sqrt{5})(\sqrt{11} + 6\sqrt{5})$

(b) $(\sqrt{3} + \sqrt{5})^2$

22. Simplify.

(a) $(\sqrt{2} - 7)^2$

(b) $(\sqrt{6} + \sqrt{2})^2$

23. Simplify.

(a) $(\sqrt{3} + \sqrt{5})(\sqrt{3} - \sqrt{5})$

(b) $(\sqrt{2} - \sqrt{7})(\sqrt{2} + \sqrt{7})$

24. Simplify.

(a) $(2 + \sqrt{5})(2 - \sqrt{5})$

(b) $(2\sqrt{6} + 3\sqrt{2})(2\sqrt{6} - 3\sqrt{2})$

25. Simplify.

(a) $(3\sqrt{3} - 2\sqrt{2})(3\sqrt{2} + 2\sqrt{2})$

(b) $(2 + 3\sqrt{7})(2 - 3\sqrt{7})$
