ALGEBRA 2

Simplifying Radical Expressions

Simplify the following Expressions

1. $5\sqrt{2}+3\sqrt{2}$
2. $8\sqrt{5}+6\sqrt{5}$
3. $\sqrt{6}+2\sqrt{6}$
4. $4\sqrt{7}+3\sqrt{7}$
5. $8\sqrt{10}+\sqrt{10}$
6. $7\sqrt{3}-2\sqrt{3}$
7. $10\sqrt{6}-8\sqrt{6}$
8. $2\sqrt{11}-6\sqrt{11}$
9. $-8\sqrt{15}+10\sqrt{15}$
10. $3\sqrt{2}-\sqrt{8}$
11. $\sqrt{27}+4\sqrt{3}$
12. $\sqrt{12}+3\sqrt{3}$
13. $\sqrt{28}+6\sqrt{7}$
14. $5\sqrt{3}-\sqrt{12}$
15. $\sqrt{18}-2\sqrt{2}$
16. $6\sqrt{2}-\sqrt{32}$
17. $9\sqrt{5}-\sqrt{20}$
18. $\sqrt{12}+\sqrt{27}$
19. $\sqrt{32}-\sqrt{8}$
20. $4\sqrt{3}-\sqrt{12}$
21. $\sqrt{18}+\sqrt{27}$
22. $\sqrt{2}-\sqrt{8}+\sqrt{32}$
23. $\sqrt{48}-\sqrt{12}$
24. $\sqrt{27}+\sqrt{75}$

Solutions

1. $5\sqrt{2}+3\sqrt{2}=8\sqrt{2}$
2. $8\sqrt{5}+6\sqrt{5}=14\sqrt{5}$
3. $\sqrt{6}+2\sqrt{6}=3\sqrt{6}$
4. $4\sqrt{7}+3\sqrt{7}=7\sqrt{7}$
5. $8\sqrt{10}+\sqrt{10}=9\sqrt{10}$
6. $7\sqrt{3}-2\sqrt{3}=5\sqrt{3}$
7. $10\sqrt{6}-8\sqrt{6}=2\sqrt{6}$
8. $2\sqrt{11}-6\sqrt{11}=-4\sqrt{11}$
9. $-8\sqrt{15}+10\sqrt{15}=2\sqrt{15}$
10. $3\sqrt{2}-\sqrt{8}\Rightarrow 3\sqrt{2}-2\sqrt{2}=\sqrt{2}$

11. $\sqrt{27}+4\sqrt{3} \Rightarrow 3\sqrt{3}+4\sqrt{3}=7\sqrt{3}$

12. $\sqrt{12}+3\sqrt{3} \Rightarrow 2\sqrt{3}+3\sqrt{3}=5\sqrt{3}$

13. $\sqrt{28}+6\sqrt{7} \Rightarrow 2\sqrt{7}+6\sqrt{7}=8\sqrt{7}$

14. $5\sqrt{3}-\sqrt{12} \Rightarrow 5\sqrt{3}-2\sqrt{3}=3\sqrt{3}$

15. $\sqrt{18}-2\sqrt{2} \Rightarrow 3\sqrt{2}-2\sqrt{2}=\sqrt{2}$

16. $6\sqrt{2}-\sqrt{32} \Rightarrow 6\sqrt{2}-4\sqrt{2}=2\sqrt{2}$

17. $9\sqrt{5}-\sqrt{20} \Rightarrow 9\sqrt{5}-2\sqrt{5}=7\sqrt{5}$

18. $\sqrt{12}+\sqrt{27} \Rightarrow 2\sqrt{3}+3\sqrt{3}=5\sqrt{3}$

19. $\sqrt{32}-\sqrt{8} \Rightarrow 4\sqrt{2}-2\sqrt{2}=2\sqrt{2}$

20. $4\sqrt{3}-\sqrt{12} \Rightarrow 4\sqrt{3}-2\sqrt{3}=2\sqrt{3}$

21. $\sqrt{18}+\sqrt{27}=3\sqrt{2}+3\sqrt{3}$

22. $\sqrt{2}-\sqrt{8}+\sqrt{32} \Rightarrow \sqrt{2}-2\sqrt{2}+4\sqrt{2}=3\sqrt{2}$

23. $\sqrt{48}-\sqrt{12} \Rightarrow 4\sqrt{3}-2\sqrt{3}=2\sqrt{3}$

24. $\sqrt{27}+\sqrt{75} \Rightarrow 3\sqrt{3}+25\sqrt{3}=28\sqrt{3}$