

Fractions: Simplify.

$$1. -\frac{9}{4} \cdot \frac{1}{3}$$

$$2. -2 \cdot \frac{3}{7}$$

$$3. -2\frac{3}{8} \cdot 2\frac{1}{2}$$

$$4. -\frac{5}{21} \div -\frac{10}{7}$$

$$5. \frac{-9}{\frac{5}{2}}$$

$$6. \frac{-3\frac{7}{10}}{2\frac{1}{4}}$$

$$7. 6 - \frac{1}{6}$$

$$8. \left(-\frac{4}{5}\right) - \left(\frac{7}{8}\right)$$

$$9. \left(\frac{9}{5}\right) + \left(-\frac{4}{3}\right)$$

$$10. 2 - \frac{13}{8}$$

$$11. -1 + \left(-2\frac{2}{5}\right)$$

$$12. 2\frac{4}{5} - \frac{5}{8}$$

$$13. \frac{\frac{1}{3}}{\frac{35}{36}}$$

$$14. \frac{2\left(-\frac{1}{6}\right)}{1 - \left(-\frac{1}{6}\right)^2}$$

$$15. \frac{2\left(\frac{3}{4}\right)}{1 - \left(\frac{3}{4}\right)^2}$$

$$16. \frac{1 - \frac{24}{25}}{\frac{7}{-25}}$$

Square Roots: Simplify.

$$17. \sqrt{3}(-5\sqrt{10} + \sqrt{6})$$

$$18. -2\sqrt{15}(-3\sqrt{3} + 3\sqrt{5})$$

$$19. (\sqrt{2} + \sqrt{5})(\sqrt{2} - \sqrt{5})$$

$$20. (5 + 4\sqrt{3})(3 + \sqrt{3})$$

$$21. \frac{\sqrt{15}}{5\sqrt{20}}$$

$$22. \frac{3 - 3\sqrt{3}}{4\sqrt{8}}$$

$$23. \frac{3 + \sqrt{2}}{\sqrt{10}}$$

$$24. \frac{3}{4 + 4\sqrt{5}}$$

$$25. \frac{4}{\sqrt{2} - 5\sqrt{3}}$$

$$26. \frac{3 - 4\sqrt{3}}{4\sqrt{5} + 3\sqrt{2}}$$

$$27. \left(\frac{2}{\sqrt{3}}\right)^2 - \left(\frac{4}{\sqrt{3}}\right)^2$$

$$28. 2\left(\frac{6}{\sqrt{37}}\right)^2 - 1$$

$$29. 1 - 2\left(\frac{6}{\sqrt{216}}\right)^2$$

$$30. \frac{-3\sqrt{5}}{1 - \left(-\frac{3\sqrt{5}}{2}\right)^2}$$

$$31. \sqrt{\frac{2 + \sqrt{3}}{\sqrt{2}}}$$

$$32. \sqrt{\frac{1 - \frac{\sqrt{3}}{2}}{2}}$$

$$33. \sqrt{\frac{2 + \sqrt{3}}{\frac{2}{2}}}$$

$$34. \sqrt{\frac{2 + \frac{2}{5\sqrt{3}}}{2}}$$