Chapter 5 Section 5: Exponents, Order of Operations with Fractions, and Complex Fractions

Problems

Evaluate.

1. $\left(-\frac{1}{2}\right)^4 =$ _____

2. $\left(\frac{3}{4x}\right)^2 =$ _____

3. $-\left(\frac{w}{3}\right)^2 =$ _____

4. $\left(1\frac{2}{5}\right)^3 =$ _____

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

6. $\left(-\frac{2r}{3s}\right)^4 =$ _____

Use the Order of Operations to simplify.

7. $\frac{1}{2}+\frac{1}{2}\cdot\frac{1}{2} =$

_____

8. $\frac{12}{18}\cdot\frac{27}{36}\cdot\frac{6}{9} =$

_____

9. $5\frac{1}{6}-4\frac{1}{3}-2\frac{1}{2} =$

_____

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

_____

11. $-2\left(\frac{x}{3}+\frac{6x}{7}\right) =$

_____

12. $9\frac{2}{3}\div -3\frac{1}{19}-\frac{5}{8} =$

_____

13. $\frac{4v^3}{7}+\left(\frac{2v}{3}\right)^2\div\frac{28}{6v} =$

_____

14. $\frac{9c^5}{25}\div\left(\frac{12c^2}{14}\cdot\frac{c}{2}\right) =$

_____

15. $2y^3+\left(3\frac{3}{8}\right)\left(\frac{y}{3}\right)^3-\frac{y^3}{8} =$

_____

16. $\frac{1}{4}\left(\frac{1}{9}-\frac{31}{36}\right)\div\left(1\frac{1}{2}\right)^4 =$

_____

17. $\frac{3}{4r}+\left(\frac{r}{2}\right)^5\div\frac{r^6}{2}-\frac{1}{r} =$

_____

18. $\frac{t^4}{8}\div\left(\frac{u^6}{t}\cdot\frac{t^3}{u^4}\right)-\left(\frac{t}{u}\right)^2 =$

_____

Simplify.

19. $\dfrac{\frac{2}{5}}{4} =$ _____

20. $\dfrac{\frac{8}{11}}{\frac{2}{3}} =$ _____

$\dfrac{1}{1-\frac{1}{3}} =$ _____

22. $\dfrac{2-\frac{1}{6}}{2+\frac{1}{6}} =$ _____

23. $\dfrac{\frac{5}{6}-\frac{7}{12}}{6} =$ _____

24. $\dfrac{\frac{1}{5}+\frac{1}{2}}{\frac{3}{4}-1} =$ _____

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25. $\dfrac{\frac{2}{9}-\frac{1}{2}}{\frac{1}{2}+\frac{11}{18}} =$ _____

26. $\dfrac{-\frac{2}{3}+\frac{2}{15}}{-\frac{4}{15}-\frac{3}{5}} =$ _____

27. $\dfrac{4m-\frac{2m}{7}}{-4\frac{1}{3}} =$ _____

28. $\dfrac{\frac{y}{2}+\frac{3y}{4}}{\frac{10}{x}+\frac{5}{8x}} =$ _____

29. $\dfrac{\frac{2x}{7}-\frac{11x}{14}}{\frac{x^2}{2}+\frac{4x^2}{7}} =$ _____

30. $\dfrac{-\frac{3f}{4}-\frac{f}{12}}{-\frac{5g}{24}+\frac{5g}{12}} =$ _____