

1. Equations with rationals
2. Operations with rationals  
(and monomials )
3. Simplifying algebraic fractions
4. Converting fractions and decimals
5. Comparing, ordering rational numbers
7. Exponent rules  
(Including negative exponents)
8. GCF
9. Word problems using fractions

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"I'll be the quarterback, Tom will be the halfback,  
and you can be the three-quarters-back."

Solve For x:

1)  $-\frac{4}{7}x = 24$

2)  $3\frac{1}{3}x = -50$

3)  $6 - \frac{n}{5} = 7$

4)  $\frac{1}{3}x + 4 = -6$

5)  $-5x - 9 + x = \frac{45}{3}$

6)  $\frac{1}{2}x + \frac{3}{5} = 2x - \frac{9}{10}$

7)  $0.3(x + 4) = 2.7x$

8)  $-x - 9 = \frac{3}{4}\left(2x + \frac{4}{3}\right)$

9)  $\frac{6x - 2}{-4} = 8$

Add, Subtract, Multiply, or Divide:

10)  $\frac{4}{11} - \frac{1}{3}$

11)  $-9\frac{1}{4} - 5\frac{2}{3}$

12)  $-\frac{4}{9} + \frac{5}{6}$

13)  $-4\frac{3}{5} + 10\frac{3}{8}$

14)  $\frac{-7x}{10} - \frac{5x}{3}$

15)  $\frac{7}{4b} + \frac{8}{b}$

16)  $\frac{-7}{6y} + \frac{11}{4b}$

17)  $\left(-6\frac{2}{3}\right)\left(\frac{-21}{32}\right)$

18)  $\left(3\frac{3}{10}\right) \div \left(\frac{3}{14}\right)$

19)  $\frac{-4x}{5y^2} \cdot \frac{10y^3}{x^2}$

20)  $\frac{5a}{21} \cdot \frac{7}{b^2} \cdot \frac{6ab^3}{35a}$

21)  $a \cdot a$

22)  $(-5a^4b^{-2})(7ab^4)$

22)  $(12x^2yz^5)(-4xyz^{-2})$

23)  $\frac{p^3r^2}{pr^4}$

24)  $\frac{36a^3bc^5}{9abc^2}$

25)  $\frac{-12x^2yz^4}{4x^3z^5}$

Use equivalent fractions or division to convert each number to a decimal:

26)  $\frac{1}{3}$

27)  $\frac{4}{25}$

28)  $\frac{3}{5}$

29)  $-\frac{5}{16}$

30)  $-4\frac{24}{55}$

Write each decimal as a fraction in simplest form:

31) 0.4

32) 0.42

33) -0.08

34) 0.55

35) 4.68

Order from least to greatest:

36)  $2\frac{14}{20}, \left(\frac{3}{5}\right)^{-2}, 2.77$

37)  $5^{-2}, 0.\overline{03}, \left(\frac{11}{2}\right)^{-1}$

38)  $\left(\frac{3}{2}\right)^{-2}, (0.7)^3, \left(2\frac{2}{3}\right)^{-1}$

39) What digit(s) could be used to make 56, 304, 753, 0\_\_4 divisible by:

a. 9 \_\_\_\_\_ b. 3 \_\_\_\_\_ c. 6 \_\_\_\_\_ d. 8 \_\_\_\_\_

Evaluate:

40)  $5^{-3}$

41)  $\left(\frac{1}{4}\right)^{-2}$

42)  $\left(\frac{3}{4}\right)^{-2}$

43)  $\left(1\frac{1}{2}\right)^{-3}$

52) Find the GCF:

$48x^3yz^2$  &  $32xy^2z$

$25ab^2c$ ,  $45ab$

54) How many glasses of cider, each  $4\frac{3}{8}$  ounces, can be poured from a container holding 70 ounces?

55) Jennifer has run 12 miles of his race. She has completed  $\frac{3}{5}$  of the total race. What is the total length of the race?

56)  $\frac{3}{8}$  of the 72 teams in a tournament were in the year before. How many teams were in the year before?

57) Jack has 15 pieces of ribbon all cut from one larger ribbon. If each piece measures  $1\frac{2}{5}$  ft., how long was the original piece of ribbon?

**ANSWERS**

1. $x = -42$	16. $\frac{-14b + 33y}{12by}$	30. $-4.4\overline{36}$	53. $5ab$
2. $x = -15$	17. $4\frac{3}{8}$	31. $\frac{2}{5}$	54. 16 glasses
3. $n = -5$	18. $15\frac{2}{5}$	32. $\frac{21}{50}$	55. 20 miles
4. $x = -30$	19. $-\frac{8y}{x}$	33. $-\frac{2}{25}$	56. 27 teams
5. $x = -6$	20. $\frac{2b}{7}$	34. $\frac{11}{20}$	57. 21 ft.
6. $x = 1$	21. $a$	35. $4\frac{17}{25}$	
7. $x = \frac{1}{2}$	22. $-35a$	36. $\frac{14}{20} \left(\frac{3}{5}\right)^{-2}$	
8. $x = -4$	22. $-48x$	37. $0.\overline{03} \left(\frac{11}{2}\right)^{-1}$	
9. $x = -5$	23. $\frac{p^2}{r^2}$	38. $(0.7)^3, \left(2\frac{2}{3}\right)^{-1}, \left(\frac{3}{2}\right)^{-2}$	
10. $\frac{1}{33}$	24. $4a^2c^3$	39. Discuss in class	
11. $-14\frac{11}{12}$	25. $-\frac{3y}{xz}$	40. $\frac{1}{125}$	
12. $\frac{7}{18}$	26. $0.\overline{3}$	41. 16	
13. $5\frac{31}{40}$	27. 0.16	42. $\frac{16}{9}$	
14. $-\frac{71x}{30}$	28. 0.6	43. $\frac{8}{27}$	
15. $\frac{39}{4b}$	29. $-0.3125$	52. $16xyz$	