



ACT COMPASS Preparation Worksheet

Pre-algebra: Basic Operations (Fractions)

1. $6 \left(\frac{4}{3} \left(1 + \frac{1}{7} \right) \right) \div \frac{13}{10} = \frac{640}{91}$ **or** $7 \frac{3}{91}$

4. $\frac{3}{2} + 1^3 + 1 \frac{1}{10} = \frac{18}{5}$ **or** $3 \frac{3}{5}$

2. $\left(\frac{3}{2} \times 3 \frac{1}{2} \right) \div \left(\frac{6}{5} - 1 \right) = \frac{105}{4}$ **or** $26 \frac{1}{4}$

5. $\left(4 \frac{9}{10} - 1 \right)^3 \div 2 \frac{1}{6} = \frac{13689}{500}$ **or** $27 \frac{189}{500}$

3. $\left(\frac{2}{3} + \frac{7}{5} + \frac{11}{6} \right) \times 2 \frac{1}{4} = \frac{351}{40}$ **or** $8 \frac{31}{40}$

6. $\left(\frac{4}{3} - \frac{1}{2} \right) \div \frac{5}{3} \times 1 \frac{3}{4} = \frac{7}{8}$

Write the decimal equivalent beside each fraction.

7. $\frac{7}{9} = 0.\overline{7}$

10. $\frac{4}{7} = 0.\overline{571428}$

13. $\frac{5}{11} = 0.\overline{45}$

8. $\frac{7}{8} = 0.875$

11. $\frac{2}{8} = 0.25$

14. $\frac{10}{12} = 0.8\overline{3}$

9. $\frac{5}{7} = 0.\overline{714285}$

12. $\frac{3}{5} = 0.6$

15. $\frac{6}{11} = 0.\overline{54}$

Write the fraction for each decimal.

16. $0.714285... = \frac{5}{7}$

19. $0.888... = \frac{8}{9}$

22. $0.08333... = \frac{1}{12}$

17. $0.5 = \frac{1}{2}$

20. $0.25 = \frac{1}{4}$

23. $0.571428... = \frac{4}{7}$

18. $0.0909... = \frac{1}{11}$

21. $0.142857... = \frac{1}{7}$

24. $0.857142... = \frac{6}{7}$

25. Anna's recipe for apple fritters makes eighteen fritters and uses two-thirds of a cup of milk. Anna wants to make six fritters. How much milk will she need? **$\frac{2}{9}$ cup of milk**

26. Natalie is making chocolate milkshakes for Nicole's birthday party. There will be fourteen people at the party. It takes a third of a cup of milk to make one chocolate milkshake. How many cups of milk will it take to make fourteen milkshakes? **$4 \frac{2}{3}$ cups of milk**

27. The Smith family went to a hockey game last weekend. They spent \$12 on food, \$41 on souvenirs, and \$9 on drinks. What fraction of their expenditures was spent on drinks? **$\frac{9}{62}$**



Find the missing number in the equivalent fractions below.

28. $\frac{1}{7} = \frac{3}{21}$

36. $\frac{1}{2} = \frac{2}{4}$

44. $\frac{3}{11} = \frac{9}{33}$

29. $\frac{1}{11} = \frac{4}{44}$

37. $\frac{4}{9} = \frac{12}{27}$

45. $\frac{2}{4} = \frac{4}{8}$

30. $\frac{3}{9} = \frac{15}{45}$

38. $\frac{4}{9} = \frac{20}{45}$

46. $\frac{5}{6} = \frac{25}{30}$

31. $\frac{8}{12} = \frac{16}{24}$

39. $\frac{9}{10} = \frac{45}{50}$

47. $\frac{5}{10} = \frac{20}{40}$

32. $\frac{3}{4} = \frac{15}{20}$

40. $\frac{8}{9} = \frac{40}{45}$

48. $\frac{6}{11} = \frac{12}{22}$

33. $\frac{2}{7} = \frac{10}{35}$

41. $\frac{7}{9} = \frac{21}{27}$

49. $\frac{4}{6} = \frac{8}{12}$

34. $\frac{6}{11} = \frac{24}{44}$

42. $\frac{6}{10} = \frac{12}{20}$

50. $\frac{3}{10} = \frac{6}{20}$

35. $\frac{3}{5} = \frac{12}{20}$

43. $\frac{1}{5} = \frac{2}{10}$

51. $\frac{2}{11} = \frac{6}{33}$