

Perform the indicated operations:

1. Subtract 1,742 from 70,306
2. Subtract 697 from 12,040
3. Divide 3,636 by 12
4. Multiply 304 and 23
5. Divide 253.12 by 2.8
6. Subtract 49.7 from 100.40
7. Add 126.63 and 2.1; round to nearest tenth
8. Divide 6037 by 30
9. $3059 \div 11$
10. $4 - 0.75$
11. $\frac{6}{7} \times 2.1$
12. Estimate the product by rounding to the nearest hundred 340×960

Simplify the following using orders of operations:

13. $32 - 3.4^2$
14. $50 - 2 \cdot 3^2$
15. $39 - (4 + 2)^2$
16. $75 - 3 \cdot 2^3$
17. $40 - 5(\sqrt{36} + 2)$

18. $\sqrt{64} - 8 \div 2 + 3$

19. $18 \div 3\sqrt{25}$

20. $-12 + 5 + (-4)$

21. $-10 - (-4) + 3$

22. $\frac{6(-8)}{-4}$

23. $\left(\frac{3}{7} + \frac{5}{9}\right) \times \left(\frac{3}{4}\right)^2$

24. $.153 \times 10^2 - 0.16 \times 0.3$

25. $1.53 \times 10^2 - .18 \div 0.03$

26. $43.6 \div 10^2 - 0.46 \times 0.2$

27. $\frac{8(-9)}{-4}$

Simplify and write answers using mixed numerals

28. $\frac{3}{4} + \frac{5}{12} \div \frac{15}{16}$

29. $\frac{3}{4} + \frac{5}{12} \times \frac{15}{16}$

30. $\frac{8}{9} - \frac{2}{3} \div \frac{12}{14}$

31. $2\frac{2}{3} \div 3\frac{4}{9} + \frac{7}{31}$

32. $2\frac{2}{5} \times 3\frac{3}{4} - \frac{5}{6}$

33. $4\frac{3}{8} - 2\frac{5}{12}$

34. $6\frac{5}{6} + 3\frac{7}{10}$

35. $3\frac{5}{12} - 1\frac{7}{8}$

36. $6\frac{3}{10} + 3\frac{3}{4}$

Solve the following

37. 45 is 30% of what number?

38. 215 is what percent of 300?

39. $87 = 53 + 2a$

40. $\frac{3}{12} = \frac{t}{24}$

41. $\frac{213}{z} = \frac{2}{6}$

Change the following to the proper notation42. Write $\frac{32}{9}$ as a mixed number.43. Change to decimal notation $4\frac{3}{20}$ 44. Change to decimal notation $\frac{3}{8}$

45. Change to fraction notation 125%

46. Change to decimal notation 135%

47. Change to fraction notation 265%

48. Change to percent notation .385

Find the average

49. Five students took the placement test and they got the following grades:

53, 81, 95, 75, 86. Find the average of the scores.

Simplify the given ratio

50. The ratio is 18 to 36

Solutions:

1. 68,564	21. -3
2. 11,343	22. 12
3. 303	23. $\frac{31}{56}$
4. 6,992	24. 15.252
5. 90.4	25. 147
6. 50.7	26. .344
7. 128.7	27. 18
8. 201.233	28. $1\frac{7}{36}$
9. 278.09	29. $1\frac{9}{64}$
10. 3.25	30. $\frac{1}{9}$
11. 1.8	31. 1
12. 300,000	32. $8\frac{1}{6}$
13. 20.44	33. $1\frac{23}{24}$
14. 32	34. $10\frac{8}{15}$
15. 3	35. $1\frac{13}{24}$
16. 51	36. $10\frac{1}{20}$
17. 0	37. 150
18. 7	38. 71.7%
19. 30	39. $a = 17$
20. -11	

40. $t = 6$	
41. $z = 639$	
42. $3\frac{5}{9}$	
43. 4.15	
44. 0.375	
45. $\frac{125}{100} = \frac{5}{4}$	
46. 1.35	
47. $\frac{265}{100} = \frac{53}{20}$	
48. 38.5%	
49. average = 78	
50. 1:2	

Word Problems

1. Melanie is training to run a marathon. She trains 3 days a week, on Monday she runs $3\frac{5}{8}$ miles, on Wednesday she runs $4\frac{3}{4}$ miles, and on Friday she runs $5\frac{1}{2}$ miles. What is the average miles she ran this week?
2. Chris Lee is a runner on the track team. He ran in a relay race in the last track meet. The first runner completed his lap in 12.7 seconds, the next runner completed his lap in 12.75 seconds, and the last runner completed his lap in 10.31 seconds. What is the team average lap time for this relay race?
3. Peter is purchasing a living room set for \$5,226. He is paying \$1500 down and will pay the rest in equal monthly payments over a period of 12 months. What is his monthly payment?
4. County police officers earn a starting salary of \$28,750 yearly. After three years on the job, they receive a promotion, which includes a 4% increase in salary. What is the new yearly salary?

5. Steve takes his wife Shannon out for dinner on Friday night. Steve charges the cost of their meals, \$42.20, plus a 15% tip for the waiter to his debit card. What was the total amount charged to his debit card?
6. The Math Club hosted a pasta dinner fundraiser. One hundred and forty six tickets were sold at \$8 each. If the expenses for the dinner totaled \$885, how much money did the Math Club raise?
7. If the cost for a 64 ounce container of Gatorade is \$6.59. What is the unit price in cents per ounce? (Round your answer to the nearest cent)
8. A 24 pack of CDs cost \$10.89. What is the unit price in cents per CD? (Round your answer to the nearest cent)
9. Nancy is putting new carpeting in her town house. She needs 20.3 square yards in the living room, 16.2 square yards in the dining room, 18 square yards in the bedroom and 6 square yards in the hallway. If the cost of carpeting is \$16.50 per square yard what will it cost for Nancy to carpet the four rooms?
10. A window frame measures $2\frac{1}{2}$ feet by $5\frac{3}{4}$ feet. If the trim that goes around the outside of the window costs \$2.00 per foot, how much will the total cost of the trim be?
11. 71.5 is 65% of what number?
12. 81 is 54% of what number?
13. Approximately 75 out of every 100 residents in Passaic County attend some form of higher education. There are an estimated 125,000 residents in Passaic County. How many of these people would you expect to attend some form of higher education?
14. During freshman orientation at Ohio State University, students are advised to spend 7 hours a week studying for every 2 hours a week they are in class. If the average freshman at Ohio State University is in class for 16 hours a week how many hours a week should they be studying?
15. If a cookie recipe calls for $1\frac{3}{4}$ cups of flour and you want to make $\frac{2}{3}$ of the recipe, how much flour will you need?
16. My fuel can for my lawn mower holds $1\frac{3}{4}$ gallons of gas. If the can is $\frac{3}{4}$ full, how much fuel will I have in the gas can?

17. A roll of fabric contains $4\frac{1}{3}$ yards of material. If you used $2\frac{3}{4}$ yards on a gift for your mother, how much fabric is left?
18. A pipe measures 24.5 meters long. A section 5.7 meters long is cut from the pipe, how much is left?
19. Tommy has $4\frac{3}{4}$ lbs of hamburger meat. He goes to the store and buys $2\frac{1}{2}$ lbs. How much hamburger meat does Tommy have?
20. Amy has 2.3 liters of water; she needs to mix it with 4.05 liters of molasses for a particular recipe. How many liters of the mixture will she have?

Solutions

1. $4\frac{5}{8}$
2. 11.92 seconds
3. \$310.50
4. \$29,900
5. \$48.53
6. \$283
7. \$0.10
8. \$0.45
9. \$998.25
10. \$33
11. 110
12. 150
13. 93,750 residents
14. 56 hours
15. $1\frac{1}{6}$
16. $1\frac{5}{16}$
17. $1\frac{7}{12}$
18. 18.8 meters
19. $7\frac{1}{4}$ lbs
20. 6.35 liters