

In problems 1 and 2 find the fractional part of a total budget of \$1,200 that belongs to the expense of each item.

1. Utilities \$55	a. 7.58%	b. 6.58%	c. 5.58%	d. 4.58%
2. Food \$190	a. 16.8%	b. 15.8%	c. 17.8%	d. 18.8%

In problems 3-5 find the decimal equivalent of each fraction to three decimal places.

3. $\frac{4}{7}$	a. 0.057	b. 28	c. 0.571	d. 0.57
4. $\frac{7}{9}$	a. 7880.	b. 0.7778	c. 0.78	d. 0.778
5. $\frac{4}{15}$	a. 0.267	b. 0.266	c. 0.277	d. 0.268
6. Phillip Armbruster has \$600 in his savings account earning $5\frac{3}{4}\%$ annual interest. After 12 months, and using the simple interest method, what amount of interest will he have earned?	a. \$345.00	b. \$ 31.50	c. \$ 34.50	d. \$315.00
7. On Sunday, Alice Barr used the automatic teller machine to deposit a check for \$637.15 and to withdraw \$175 in cash for shopping. If her starting balance was \$413.63, what is her new balance?	a. \$ 462.15	b. \$ 238.63	c. \$1,050.78	d. \$ 875.78
8. Quinn LeGrow worked at three jobs in three weeks. In the first week, he earned \$310. In the next week, he was paid \$334. In the third week, he was paid \$307. What average pay per week did Quinn earn for these three weeks?	a. \$951	b. \$317	c. \$978	d. \$326
9. In a class of 34 students, 19 are girls and 15 are boys. The ratio of girls to boys is	a. 1 to 2.27	b. 1 to 1.27	c. 1.27 to 1	d. 2.27 to 1
10. Elroy Durell is paid \$8.40 an hour for regular time worked. He is paid time and a half for any hours worked above 40 hours. This week Elroy worked 39 hours. What is Elroy's pay for the five-day work week?	a. \$327.60	b. \$336.00	c. \$491.40	d. \$337.60
11. Sean Weggert's regular time pay rate is \$8.73 an hour. Last week he was paid for 37 regular time hours at his regular rate and for 5 overtime hours at a time and a half overtime rate. Sean's gross pay for the week was	a. \$323.01	b. \$ 65.48	c. \$388.49	d. \$368.49

**MID-CITY SAVINGS BANK
IN ACCOUNT WITH: ROSEMARIE LEVITT**

Date		Withdrawal	Deposit	Interest	Balance
Jan	2				827.30
Jan	15		135.00		
Feb	9	75.00			
Mar	26		63.70		
Apr	1			13.44	
May	7		110.00		
June	12	100.00			
June	26		80.17		
July	1			15.67	

12. For the savings account passbook shown below, find the account balance for July 1.	a. \$1,176.17	b. \$1,041.17	c. \$1,054.61	d. \$1,070.28
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Use the following table to complete questions 13-14.

CASH VALUES PER \$1,000 OF INSURANCE		
End of Year	Cash and Loan Values	Paid-up whole life
5	\$22.30	\$134
10	\$84.34	\$451
15	\$195.76	\$785

13. Lorna Mills took out a life insurance policy for \$7,000. At the end of the tenth year, she turned in the policy for its cash value and received what amount from the insurance company?	a. \$134.00	b. \$ 22.30	c. \$ 84.34	d. \$590.38
14. When he began working at his first full-time job, Guillermo Valdivia took out a whole life policy for \$42,000. At the end of five years, Guillermo decided to cancel the policy and take the cash value of the policy in paid-up whole life insurance. The amount of paid-up insurance he received from the insurance company was what amount?	a. \$ 134.00	b. \$5,628.00	c. \$ 22.30	d. \$ 936.60
<i>In problems 15 and 16 find the banker's interest to the nearest cent.</i>				
15. Principal: \$2,500; Rate: 9%; Time: 180 days; Interest: ?	a. \$104.32	b. \$109.75	c. \$112.50	d. \$110.96
16. Principal: \$20,000; Rate: 16%; Time: 300 days; Interest: ?	a. \$2,360.14	b. \$2,630.14	c. \$2,666.67	d. \$2,603.14
17. Dwayne spent $\frac{3}{12}$ hour eating, $\frac{11}{12}$ hour watching TV, and $\frac{5}{12}$ hour reading. How much longer did Dwayne spend reading than eating?	a. $\frac{1}{6}$	b. $\frac{1}{7}$	c. $\frac{5}{6}$	d. $\frac{2}{7}$
18. Book A is $\frac{1}{8}$ inch thick, book B is $\frac{3}{8}$ inch thick, and Book C is $\frac{5}{8}$ inch thick. What is the total thickness of all three books?	a. $1\frac{3}{7}$	b. $1\frac{1}{7}$	c. $1\frac{1}{8}$	d. $1\frac{3}{8}$
<i>In problems 19-21 convert the following percents to decimal values.</i>				
19. 24%	a. 240	b. 0.24	c. 0.42	d. 2.4
20. $7\frac{3}{4}\%$	a. 0.00775	b. 7.75	c. 0.775	d. 0.0775
21. 75.3%	a. 0.753	b. 0.0753	c. 7.53	d. 0.0753
<i>For problems 22-24 compute the percent.</i>				
22. \$6.65 is what percent of \$95?	a. 14.28%	b. 1.42%	c. 0.07%	d. 7%
23. \$14 is what percent of \$175?	a. 0.8%	b. 8%	c. 0.08%	d. 80%
24. \$250 is what percent of \$1500?	a. 167%	b. 1.67%	c. 16.7%	d. 0.167%
<i>For problems 25-27 find the quarterly interest.</i>				
25. \$300 at 5%	a. \$150.00	b. \$ 37.50	c. \$ 15.00	d. \$ 3.75
26. \$750 at 6%	a. \$11.25	b. \$22.50	c. \$10.50	d. \$21.00
27. \$400 at $5\frac{1}{2}\%$	a. \$10.50	b. \$ 5.50	c. \$11.00	d. \$ 7.50

28. Loretta Patterson deposited \$429 in a new savings account at Henry County Bank and Trust. She made no other deposits or withdrawals. After 6 months, the interest was computed at an annual rate of 6¾%. How much simple interest did her money earn?	a. \$13.84	b. \$14.48	c. \$14.38	d. \$13.94			
29. At a local Dunkin Donuts Shop, a survey showed that, out of 5,000 customers coming in for breakfast, 4,500 ordered a cup of coffee with their meal. What percent of customers ordered coffee?	a. 10%	b. 90%	c. 1%	d. 9%			
<i>For problems 30-32 convert each metric measurement.</i>							
30. 4 mm = _____ cm	a. 0.4	b. 0.04	c. 40	d. 400			
31. 5.4 m = _____ cm	a. 0.54	b. 5400	c. 540	d. 54			
32. 6700 m = _____ km	a. 6.7	b. 0.67	c. 67000	d. 670			
33. 90 decreased by _____ = 44.1	a. 39%	b. 51%	c. 49%	d. 48 %			
34. One-Stop Building Supply Company pays \$49.94 each for ladders. The company wants a 45% markup on the cost. It should sell each ladder for	a. \$72.41.	b. \$69.92.	c. \$22.47.	d. \$79.92.			
35. Alorton's tax rate is \$4.125 on each \$100 of assessed value. Jun Mori owns a home in Alorton which is valued at \$40,000 and assessed at 40%. What is the tax on Mori's home this year?	a. \$16,000	b. \$ 160	c. \$ 660	d. \$ 260			
36. _____ is 20% more than 50.	a. 110	b. 55	c. 60	d. 72			
37. 40 plus 6% of itself	a. 2.40	b. 42.40	c. 64	d. 40			
38. Randy Houck deposited his paycheck for \$385.15, a refund check from a mail order purchase for \$125.95, and \$37.20 in cash. What was Randy's total deposit?	a. \$422.35	b. \$448.30	c. \$548.30	d. \$296.40			
39. Sherry Smith opened a new checking account by depositing her paycheck for \$347.95. The check register shows her transactions since opening her account. What should her new balance be?	a. \$178.11	b. \$245.81	c. \$188.11	d. \$168.11			
	CHECK NO	DATE	CHECKS ISSUED TO	AMOUNT OF CHECK	AMOUNT OF DEPOSIT	BALANCE	
	BALANCE BROUGHT FORWARD						
	101	1/7	E&H Auto Clinic	102.14			
	102	1/11	Heisling Builders	67.70			
40. Four employees are paid a monthly salary as follows: Bob, \$1,300; Eleanor, \$1,415; Howard, \$1,177; Martha, \$1,260. What average salary per month are these employees paid?	a. \$1,388.00	b. \$2,576.00	c. \$1,717.33	d. \$1,288.00			

41. The Hy-Gloss Paint Company gave its employees bonuses. Four employees received a bonus of \$820 each; 5 employees received a bonus of \$754 each; 6 employees were paid a bonus of \$1,100 each. What was the average bonus paid to these employees?	a. \$1,516.67	b. \$ 910.00	c. \$1,240.91	d. \$1,110.00
42. A college student earned \$246, \$288, \$234, and \$276 over a four-week period. How much must he earn during the fifth week to have average earnings of \$255 for the five weeks?	a. \$230.00	b. \$231.00	c. \$232.00	d. \$233.00
43. Ida's part-time pay for five days was \$26.20, \$28.20, \$21.40, \$27.25, and \$32.80. What was her average daily pay?	a. \$ 27.17	b. \$135.85	c. \$137.00	d. \$ 27.40
44. Alice Goh's gross pay for the week was \$258.14. A total of \$39.28 was deducted from her gross pay. What was her net pay for the week?	a. \$279.42	b. \$281.86	c. \$297.42	d. \$218.86
45. A prize of \$20,000 is to be shared by two winners of a contest in the ratio of 6 to 4. The larger share is worth	a. \$ 800.	b. \$ 1,200.	c. \$12,000.	d. \$ 8,000.
46. Two farmers, Hal and Driscoe, together own 627 acres of land in the ratio of 2 to 9, with Hal owning the smaller share. Hal owns _____ acres?	a. 114	b. 456	c. 141	d. 465
47. An appliance store sold 360 microwave ovens last year. Of that amount, $\frac{3}{8}$ was apartment-sized models. The number of apartment-sized models sold for the year was	a. 45.	b. 120.	c. 153.	d. 135.
48. Arnie's Golf and Tennis Shop sold 300 tennis racquets this year. Last year, the shop sold 375 racquets. By what fractional part did sales of tennis racquet decrease?	a. 20%	b. 80%	c. 40%	d. 60%
<i>In problems 49-51 show the decimal equivalent of the fraction to the nearest thousandth.</i>				
49. $\frac{7}{8}$	a. 0.758	b. 0.785	c. 0.875	d. 0.857
50. $\frac{6}{7}$	a. 0.875	b. 0.857	c. 0.758	d. 0.785
51. $\frac{7}{12}$	a. 0.853	b. 0.835	c. 0.538	d. 0.583
<i>Problems 52-55. Duane McCoy's job pays him \$11.25 per hour for a 40-hour week. He estimates his fringe benefits to be 29% of his yearly wages. His yearly job expenses are estimated to be dues, \$375; uniforms, \$580; commuting costs, \$934.</i>				
52. What is Duane's total annual pay?	a. \$23,400	b. \$ 450	c. \$11,700	d. \$ 5,400
53. What are Duane's total yearly salary and benefits?	a. \$ 580.50	b. \$15,093.00	c. \$ 6,966.00	d. \$30,186.00
54. What are Duane's total yearly job expenses?	a. \$1,998	b. \$1,988	c. \$1,889	d. \$1,898
55. What are Duane's net yearly job benefits?	a. \$28,279	b. \$28,297	c. \$28,927	d. \$28,729
56. Ellen Deoian was charged these amounts for the six days she spent in the hospital: \$270, \$405, \$260, \$301, \$256, \$242. These amounts included a daily hospital room charge of \$150. Ellen's insurance paid only \$120 a day for a room, but covered all other expenses. What did Ellen's insurance company pay?	a. \$ 900.00	b. \$1,734.00	c. \$1,554.00	d. \$ 180.00

57. Magdalena Figueroa's covered medical care bills for a recent illness were \$8,440. Her major medical policy had a coinsurance feature that paid 80% of all covered expenses above a \$400 deductible. The amount paid by the major medical policy was	a. \$ 400.00.	b. \$8,040.00.	c. \$6,432.00.	d. \$1,608.00.
58. The insurance premium on a homeowner's policy dropped from \$652 to \$489 when the deductible was increased from \$250 to \$750. What percent of discount was given for taking the higher deductible?	a. 25%	b. 75%	c. 50%	d. 35%
<i>Problems 59-60. On October 31, Elsa Burns borrowed \$2,800 from the Moline National Bank. She gave the bank her three-month note for that amount. The note was dated October 31 and the exact interest rate was 11%.</i>				
59. The date of maturity on the note was	a. Dec. 31.	b. Jan. 31.	c. Nov. 30.	d. Jan. 15.
60. On that date Elsa paid the note, giving the bank her check for	a. \$2,877.	b. \$2,887.	c. \$ 77.	d. \$ 87.
<i>Problems 61-62. Inez Frisch needed \$2,500 to pay a \$3,200 bill. On August 14, she borrowed the money from her bank and gave the bank a \$2,500 demand note with 15% interest. She paid the note back in full on December 12 of the same year.</i>				
61. The interest on the note was charged for _____ days.	a. 102	b. 100	c. 120	d. 110
62. The amount of interest Inez paid was \$ _____.	a. 132.92	b. 123.29	c. 123.92	d. 132.29
<i>In problems 63-64 convert from one metric unit of length to another.</i>				
63. $68.73 \text{ cm} + 6.09 \text{ m} = \underline{\hspace{1cm}} \text{ m}$	a. 74.82	b. 6.7773	c. 67.773	d. 7.482
64. $50000 \text{ mm} + 50 \text{ m} + 100 \text{ cm} = \underline{\hspace{1cm}} \text{ m}$	a. 1001	b. 50120	c. 101	d. 10.1
65. Sandy Cabell saved $\frac{1}{15}$ of her last year's total earnings of \$14,436.15. Last year Sandy saved	a. \$12,270.73.	b. \$ 962.41.	c. \$ 926.14.	d. \$ 962.14.
66. By spending more money on advertising, the Zembo Computer Center's sales receipts for July were 33% more than the previous month of June's sales of \$135,180. The sales in July were	a. \$224,398.80.	b. \$242,398.80.	c. \$189,789.40.	d. \$179,789.40.
<i>In problems 67-69 find the missing percents.</i>				
67. 42 is _____ % of 480	a. 8.75	b. 8.57	c. 9	d. 8.25
68. \$7.50 is _____ % of \$11.25	a. 67	b. 76	c. 66.67	d. 6.67
69. \$9.10 is _____ % of \$56	a. 16.52	b. 17	c. 19	d. 16.25
70. Ray Oliver was a collection agent for Regents Collections, Inc. The firm charged 25% commission. Ray collected 82% of an overdue account for \$23,568 for the Ramsey Corporation. Regents charged _____ commission for collecting the account.	a. \$19,325.76	b. \$ 4,831.44	c. \$ 8,431.44	d. \$18,574.32
71. Chieko Kato, a collection agent, collected 85% of a debt of \$1,780 for Polos Ticket Corporation. She charged 30% to make the collection. The amount owed to Kato was	a. \$1,424.00.	b. \$ 534.00.	c. \$ 453.90.	d. \$1,513.00.

72. Joe Popoff, a collection agent, collected 90% of a debt of \$5,600 that had been overdue 90 days. This collection rate was 5% more than the average collection rate for that agent. The agent charged 25% commission. The net proceeds of the debt were	a. \$5,510.	b. \$5,040.	c. \$ 252.	d. \$3,780.
73. ReoRite buys car radios at \$210 and marks them to sell at \$299. What is the markup rate based on cost to the nearest tenth of a percent?	a. 42.4%	b. 44.2%	c. 89%	d. 98%
74. The branch office of Munson Educational Films spent \$21,600 for preparing and mailing 40,000 items. What was the cost of each item mailed?	a. 5.40	b. 0.54	c. 4.50	d. 0.45
75. David Osaki has a total income of \$1,800 per month and spends \$400 a month for rent. What is the ratio of the total income to the rent?	a. 4.5 to 1	b. 1 to 4.5	c. 2 to 8	d. 8 to 2
76. The Acme Shirt Company sold 28 men's silk shirts. Customers complained that the shirts were cut poorly and returned 6 of them. Express the ratio of returned shirts to the total sold as a percent.	a. 34.1%	b. 24.1%	c. 76.6%	d. 21.4%
77. Main Street Hardware sells paint thinner in gallons and fractions of gallons according to customer needs. On Saturday, the store sold the following quantities of paint thinner in gallons: $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, $\frac{5}{8}$, and $\frac{3}{10}$. Convert fractions to decimals and then solve to find out how many gallons were sold on Saturday.	a. 2.5	b. 2.425	c. 4.225	d. 1.25
78. Shiro Matdudo borrowed \$300 by using a credit advance from his credit card company. The company's daily finance charge is 0.46 percent. The advance was issued on March 1. What was the total finance charge on the March 31 statement?	a. 0.12	b. 1.17	c. 1.71	d. 17.11
79. Veronica Keating owed Mademoiselle Fashions \$360.57 on her charge account on December 1. What is the minimum amount Veronica must pay on her December 1 balance if the store requires a minimum payment of 20 percent of the balance?	a. \$72.15	b. \$27.11	c. \$72.11	d. \$28.84
80. Rachel Baker bought 500 dresses for Fashion Carousel at \$39.60 each. She sold 300 for \$55.50, 100 at \$54 each, and the remainder at \$48 each. What was the average markup on the 500 dresses?	a. 15.90	b. 14.10	c. 14.40	d. 8.40
81. Cindy's Gift Shoppe purchased 8-inch candles at \$9.95 a dozen, less a 25 percent trade discount. If the owner wishes to sell the candles at a 35 percent markup, what should be the selling price of each dozen?	a. \$ 7.46	b. \$13.43	c. \$ 8.98	d. \$10.07
82. Carlyle Business Machines sells calculators for \$39.99. The calculators were purchased for \$20 each. What is the markup rate based on cost?	a. 100%	b. 1.01%	c. 9.95%	d. 99.95%

83. At the Casual Living Furniture Store, chairs have a selling price of \$90, less a 5 percent discount. The chairs had a cost price of \$65 each. What is the markup rate based on selling price to the nearest whole percent?	a. 23	b. 69	c. 21	d. 86
<i>In problems 84 and 85 convert each of the following fractions to decimals, then solve to the nearest thousandth.</i>				
84. $1/5 + 2/9 + 3/8$	a. 0.297	b. 0.797	c. 0.977	d. 0.779
85. $78 \frac{9}{10} - 14 \frac{7}{9}$	a. 78.909	b. 14.778	c. 64.122	d. 64.221
86. Lisa purchased a used car for \$8,000 using the dealer's installment credit plan. She made a 30% down payment and financed the remaining amount. What amount did she finance?	a. \$2,400	b. \$5,600	c. \$5,000	d. \$5,500
87. Ralph Woods purchased merchandise for \$100.70. He lives in a state where the state sales tax rate is 6 percent. What was the total amount due, including sales tax?	a. \$106.47	b. \$107.64	c. \$106.74	d. \$ 6.04
88. Robert Dillon lives in a state where the combined local and state sales tax rate is $7 \frac{3}{4}$ percent. He purchased a set of golf clubs for \$149.50. What was the sales tax due?	a. \$161.09	b. \$ 11.59	c. \$ 15.19	d. \$ 19.51
89. Mildred Yost bought two (2) radial tires at \$49.95 each and two (2) seat cushions at \$16.99 each. The sales tax where she lives is 6 percent. What was the total amount of the purchase?	a. \$141.91	b. \$ 99.90	c. \$ 33.98	d. \$133.88
90. At the end of the season, Myra Beise purchased golf shoes, originally priced at \$49.95, with a 25 percent discount. Jim Beise purchased tennis shoes, originally priced at \$55, with a 30 percent discount. The sales tax was $8 \frac{1}{4}$ percent. What was the total amount of their purchases?	a. \$37.46	b. \$38.50	c. \$75.96	d. \$82.23
91. A store sells a pound of cashews and almonds mixed. The mixture consists of 6 ounces of cashews and 10 ounces of almonds. What fractional part of the mixture is almonds?	a. $5/16$	b. $6/16$	c. $5/8$	d. $1/16$
92. Mary and Edith Jones operated a supermarket and noticed a decrease in produce sales. Their accountant advised them to discontinue the produce department when sales were below 20 percent of total sales. Sales for the next month were \$11,420, of which, \$2,150 were produce sales. Find the ratio of produce sales to total sales expressed as a percent. Round to the nearest tenth of a percent.	a. 14.8%	b. 19.8%	c. 72.2%	d. 18.8%
93. Find the cost per pound of a 32-pound grass seed mixture that cost a total of \$67.20.	a. 3.20	b. 2.20	c. 2.10	d. 1.10
94. Melanie purchased 3,500 pounds of potatoes and packaged them in bags of 100 pounds each. Of the total bags, $3/5$ was sold at \$16.25. How much was received from the sale?	a. \$341.25	b. \$341.50	c. \$ 21.00	d. \$ 35.00

95. The sales at the Acme Flower Company were \$12,500 in May and \$14,100 in June. What was the percent of increase (to the nearest tenth of a percent)?	a. 18.2%	b. 12.8%	c. 11.3%	d. 13.1%
96. Mary Bamjavic is paid a salary of \$200 a week plus 4/5% commission on weekly sales over \$7,500. Her sales last week totaled \$14,100. What are the total weekly earnings?	a. \$ 252.80	b. \$ 728.00	c. \$3,170.00	d. \$6,545.00
97. Mary Ann has a rock that weights 3/10 pound and Trudy has a rock that weighs 9/10 pound. What is the combined weight of both rocks? Reduce the fraction.	a. 12/10	b. 2 1/5	c. 1 2/5	d. 1 1/5
98. Matt receives 5½% annual interest rate on his savings account. He deposited \$1549.80 in his new account and made no other deposits or withdrawals. On October 9, he earned 3 months interest. How much simple interest did Matt receive?	a. \$85.24	b. \$21.31	c. \$42.62	d. \$24.50
99. Tim is a dental technician. A time study shows that Tim spends 2.5 hours per day assisting the dentist, 1.5 hours processing records, 3.5 hours cleaning teeth, and a 0.5 hour for lunch. What percent of his time does Tim spend cleaning teeth?	a. 32%	b. 43.75%	c. 47.5%	d. 46.67%
100. Ralph takes out a 12-month, \$1,800 simple interest loan at 10% for roof repairs. After 9 months the balance is \$467.21. He pays off the loan when the next payment is due. What is the final payment?	a. \$155.73	b. \$463.31	c. \$471.10	d. \$467.21