

Computing the Sale Price

Packet #4

1/2 credit

EXAMPLE Claudia buys \$10 earrings with a 32% discount. How much does she pay?

Think: $100\% - 32\% = 68\%$

$$\begin{array}{r} \$ 10.00 \\ \times \quad .68 \\ \hline 8000 \\ + 6000 \\ \hline \$6.8000 \end{array}$$

Claudia pays \$6.80.

Directions Use the shortcut method to compute the sale price in just one written step. Round to the next higher cent.

Regular Price	Discount	Sale Price	Regular Price	Discount	Sale Price
1. \$26.00	10%	_____	18. \$23.30	36%	_____
2. \$17.43	12%	_____	19. \$46.90	24%	_____
3. \$38.46	26%	_____	20. \$46.84	36%	_____
4. \$36.32	11%	_____	21. \$5.13	8%	_____
5. \$46.61	8%	_____	22. \$9.45	39%	_____
6. \$30.17	38%	_____	23. \$34.60	21%	_____
7. \$20.70	28%	_____	24. \$8.73	3%	_____
8. \$35.66	31%	_____	25. \$411.84	37.1%	_____
9. \$17.01	16%	_____	26. \$43.97	16%	_____
10. \$362.01	31.2%	_____	27. \$39.03	18%	_____
11. \$40.87	43%	_____	28. \$17.80	12%	_____
12. \$26.60	31%	_____	29. \$32.70	17%	_____
13. \$19.89	44%	_____	30. \$18.65	26%	_____
14. \$42.20	39%	_____	31. \$32.99	17%	_____
15. \$26.67	44%	_____	32. \$30.13	15%	_____
16. \$6.98	2%	_____	33. \$47.02	45%	_____
17. \$28.45	25%	_____	34. \$45.44	41%	_____



Buying from a Catalog

EXAMPLE

Ron and Jane plan to travel to Europe in July. They are looking for T-shirts that will keep them cool. Ron wants 1 of each style in the short-sleeve T-shirt, 1 in blue and 1 in grey, size L. Jane wants 1 each of 3 colors, size M, in the long-sleeve style. They order from this CoolGuy catalog.

CoolGuyT-shirts are great for traveling. Wash them and they dry instantly!
Men's sizes S, M, L, XL, XXL. Women's sizes XS, S, M, L, XL.

Men's CoolGuy T-shirts in Grey, White, Blue,
Black or Mineral

Short-sleeve pocket	#7264	\$26.50
Short-sleeve	#2286	\$24.50
Long-sleeve	#2285	\$29.50

Women's CoolGuy T-shirts in Lapis, White,
or Cherry

Short-sleeve	#5968	\$24.00
Long-sleeve	#5969	\$30.00

Directions Complete the order forms for Ron and Jane.

Ron

	Item #	How Many	Color	Size	Description	Amount
1.						
2.						
3.						
4.						
5.	Total of Merchandise					
6.	Add 8% sales tax					
	Shipping & Handling					5.95
7.	Total Amount					

Jane

	Item #	How Many	Color	Size	Description	Amount
1.						
2.						
3.						
4.						
5.	Total of Merchandise					
6.	Add 8% sales tax					
	Shipping & Handling					5.95
7.	Total Amount					



Renaming to the Simplest Form

EXAMPLE $\frac{9}{7}$

Think:

$$\begin{array}{r} 1 \\ 7 \overline{)9} \\ \underline{-7} \\ 2 \end{array}$$

Answer: $\frac{9}{7} = 1 \frac{2}{7}$

EXAMPLE $16 \frac{15}{4}$

$$\begin{aligned} 16 \frac{15}{4} &= 16 + \frac{15}{4} \\ &= 16 + 3 \frac{3}{4} \\ &= 19 \frac{3}{4} \end{aligned}$$

Think:

$$\begin{array}{r} 3 \\ 4 \overline{)15} \\ \underline{-12} \\ 3 \end{array} \text{ equals } 3 \frac{3}{4}$$

Directions Rename each to the simplest form.

1. $\frac{18}{5} =$

8. $\frac{22}{4} =$

15. $25 \frac{5}{4} =$

22. $\frac{123}{11} =$

29. $\frac{53}{13} =$

2. $16 \frac{4}{3} =$

9. $23 \frac{16}{9} =$

16. $\frac{33}{10} =$

23. $\frac{45}{7} =$

30. $2 \frac{3}{2} =$

3. $\frac{19}{2} =$

10. $\frac{19}{6} =$

17. $13 \frac{5}{2} =$

24. $33 \frac{16}{3} =$

31. $\frac{53}{10} =$

4. $\frac{22}{7} =$

11. $\frac{42}{5} =$

18. $\frac{29}{7} =$

25. $5 \frac{18}{9} =$

32. $\frac{75}{8} =$

5. $\frac{25}{3} =$

12. $\frac{35}{8} =$

19. $\frac{57}{6} =$

26. $1 \frac{32}{7} =$

33. $6 \frac{5}{4} =$

6. $\frac{28}{5} =$

13. $\frac{26}{13} =$

20. $\frac{64}{7} =$

27. $\frac{16}{3} =$

34. $7 \frac{4}{3} =$

7. $\frac{23}{5} =$

14. $\frac{32}{7} =$

21. $\frac{108}{9} =$

28. $\frac{47}{8} =$

35. $9 \frac{21}{4} =$



Expressing Fractions in Higher Terms

EXAMPLE Express $\frac{5}{6}$ as a fraction with a denominator of 24.

Step 1:

$$\frac{5}{6} = \frac{\quad}{24}$$

Step 2:

$$\frac{5 \times 4}{6 \times 4} = \frac{\quad}{24}$$

Step 3:

$$\frac{5 \times 4}{6 \times 4} = \frac{20}{24}$$

Step 4:

$$\frac{5}{6} = \frac{20}{24}$$

Because $24 \div 6 = 4$, multiply 5 by 4.

New fraction.

Directions Express each fraction in higher terms as indicated.

1. $\frac{7}{8} = \frac{\quad}{40}$

9. $\frac{5}{13} = \frac{\quad}{39}$

17. $\frac{3}{13} = \frac{\quad}{65}$

25. $\frac{12}{21} = \frac{\quad}{126}$

33. $\frac{5}{16} = \frac{\quad}{112}$

2. $\frac{4}{9} = \frac{\quad}{36}$

10. $\frac{4}{15} = \frac{\quad}{75}$

18. $\frac{4}{22} = \frac{\quad}{110}$

26. $\frac{2}{11} = \frac{\quad}{121}$

34. $\frac{2}{19} = \frac{\quad}{76}$

3. $\frac{2}{3} = \frac{\quad}{12}$

11. $\frac{3}{11} = \frac{\quad}{66}$

19. $\frac{5}{7} = \frac{\quad}{56}$

27. $\frac{3}{16} = \frac{\quad}{80}$

35. $\frac{5}{13} = \frac{\quad}{91}$

4. $\frac{5}{11} = \frac{\quad}{55}$

12. $\frac{2}{17} = \frac{\quad}{34}$

20. $\frac{3}{5} = \frac{\quad}{95}$

28. $\frac{4}{5} = \frac{\quad}{80}$

36. $\frac{6}{15} = \frac{\quad}{105}$

5. $\frac{5}{12} = \frac{\quad}{36}$

13. $\frac{12}{20} = \frac{\quad}{60}$

21. $\frac{3}{9} = \frac{\quad}{54}$

29. $\frac{2}{12} = \frac{\quad}{84}$

37. $\frac{4}{13} = \frac{\quad}{117}$

6. $\frac{2}{7} = \frac{\quad}{35}$

14. $\frac{11}{12} = \frac{\quad}{60}$

22. $\frac{1}{7} = \frac{\quad}{63}$

30. $\frac{5}{7} = \frac{\quad}{70}$

38. $\frac{11}{23} = \frac{\quad}{161}$

7. $\frac{6}{9} = \frac{\quad}{54}$

15. $\frac{4}{21} = \frac{\quad}{84}$

23. $\frac{2}{3} = \frac{\quad}{108}$

31. $\frac{2}{12} = \frac{\quad}{72}$

39. $\frac{35}{50} = \frac{\quad}{250}$

8. $\frac{1}{2} = \frac{\quad}{10}$

16. $\frac{1}{16} = \frac{\quad}{48}$

24. $\frac{3}{4} = \frac{\quad}{52}$

32. $\frac{3}{18} = \frac{\quad}{54}$

40. $\frac{5}{40} = \frac{\quad}{200}$



Addition of Fractions

EXAMPLE

$$12\frac{1}{5} + 4\frac{3}{5} =$$

Write this:

$$\begin{array}{r} 12\frac{1}{5} \\ + 4\frac{3}{5} \\ \hline 16\frac{4}{5} \end{array}$$

If the denominators are the same, then add the numerators.

EXAMPLE

$$13\frac{2}{7} + 3\frac{3}{14} =$$

Write this:

$$\begin{array}{r} 13\frac{2}{7} = 13\frac{4}{14} \\ + 3\frac{3}{14} = 3\frac{3}{14} \\ \hline 16\frac{7}{14} = 16\frac{1}{2} \end{array}$$

Find the least common denominator. Then add.

Simplify to the lowest terms.

Directions Add. Simplify your answers to the lowest terms.

$$\begin{array}{r} 1. \quad 13\frac{3}{8} \\ + 2\frac{2}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 9\frac{2}{3} \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad 33\frac{5}{8} \\ + \frac{1}{6} \\ \hline \end{array}$$

$$\begin{array}{r} 19. \quad 8\frac{2}{11} \\ + 5\frac{5}{66} \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 23\frac{5}{17} \\ + 5\frac{2}{17} \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad \frac{5}{6} \\ + \frac{1}{5} \\ \hline \end{array}$$

$$\begin{array}{r} 14. \quad \frac{3}{15} \\ + \frac{2}{30} \\ \hline \end{array}$$

$$\begin{array}{r} 20. \quad 2\frac{1}{5} \\ + \frac{8}{45} \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 18\frac{1}{2} \\ + 9\frac{1}{5} \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad \frac{8}{22} \\ + \frac{5}{22} \\ \hline \end{array}$$

$$\begin{array}{r} 15. \quad \frac{6}{7} \\ + \frac{4}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 21. \quad 8\frac{6}{19} \\ + 2\frac{3}{38} \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 5\frac{2}{13} \\ + 6\frac{3}{26} \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 2\frac{3}{10} \\ + 1\frac{5}{20} \\ \hline \end{array}$$

$$\begin{array}{r} 16. \quad 3\frac{3}{8} \\ + 2\frac{1}{6} \\ \hline \end{array}$$

$$\begin{array}{r} 22. \quad 32\frac{3}{16} \\ + 1\frac{2}{64} \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 3\frac{1}{7} \\ + 2\frac{1}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 35\frac{6}{7} \\ + 4\frac{1}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 17. \quad 5\frac{1}{3} \\ + 2\frac{3}{5} \\ \hline \end{array}$$

$$\begin{array}{r} 23. \quad 2\frac{5}{13} \\ + 5 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 8\frac{5}{12} \\ + \frac{1}{6} \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 14\frac{2}{10} \\ + 3\frac{1}{5} \\ \hline \end{array}$$

$$\begin{array}{r} 18. \quad 9\frac{1}{6} \\ + 2\frac{1}{9} \\ \hline \end{array}$$

$$\begin{array}{r} 24. \quad 21\frac{5}{7} \\ + 4\frac{6}{8} \\ \hline \end{array}$$



Subtraction of Fractions

EXAMPLE $13\frac{11}{12} - 2\frac{2}{12} =$

Write this: $13\frac{11}{12}$ If the denominators are the same, then subtract the numerators.

$$\begin{array}{r} 13\frac{11}{12} \\ - 2\frac{2}{12} \\ \hline 11\frac{9}{12} = 11\frac{3}{4} \end{array}$$

Simplify to the lowest terms.

EXAMPLE $6\frac{5}{7} - 2\frac{3}{21} =$

Write this: $6\frac{5}{7} = 6\frac{15}{21}$ Find the least common denominator. Then subtract.

$$\begin{array}{r} 6\frac{5}{7} = 6\frac{15}{21} \\ - 2\frac{3}{21} = 2\frac{3}{21} \\ \hline 4\frac{12}{21} = 4\frac{4}{7} \end{array}$$

Directions Subtract. Simplify your answers to the lowest terms.

1. $\frac{6}{7}$
 $-\frac{4}{7}$

7. $2\frac{2}{3}$
 $-1\frac{1}{7}$

13. $3\frac{5}{8}$
 $-2\frac{3}{16}$

19. $1\frac{27}{28}$
 $-\frac{3}{7}$

2. $14\frac{11}{15}$
 $-2\frac{1}{15}$

8. $10\frac{3}{16}$
 $-1\frac{1}{32}$

14. $8\frac{5}{12}$
 $-2\frac{2}{18}$

20. $14\frac{1}{5}$
 $-5\frac{1}{8}$

3. $8\frac{2}{3}$
 $-6\frac{1}{6}$

9. $3\frac{7}{12}$
 $-\frac{2}{8}$

15. $18\frac{2}{5}$
 $-3\frac{1}{15}$

21. $30\frac{3}{13}$
 $-4\frac{4}{39}$

4. $7\frac{4}{5}$
 $-2\frac{6}{10}$

10. $12\frac{4}{5}$
 -3

16. $7\frac{8}{9}$
 $-2\frac{3}{18}$

22. $15\frac{1}{2}$
 $-2\frac{3}{7}$

5. $6\frac{19}{20}$
 $-4\frac{1}{5}$

11. $26\frac{3}{8}$
 $-4\frac{2}{6}$

17. $26\frac{7}{8}$
 $-2\frac{1}{6}$

23. $81\frac{2}{11}$
 $-3\frac{2}{22}$

6. $25\frac{5}{7}$
 $-2\frac{3}{8}$

12. $2\frac{7}{11}$
 $-1\frac{6}{66}$

18. $9\frac{5}{12}$
 $-4\frac{2}{9}$

24. $12\frac{6}{10}$
 $-3\frac{2}{25}$



Subtraction with Renaming

EXAMPLE $10 \frac{4}{11} - 4 \frac{5}{11} =$

Write this: $10 \frac{4}{11} = 9 \frac{15}{11}$ Remember $1 = \frac{11}{11}$,
 $- 4 \frac{5}{11} = 4 \frac{5}{11}$ so $\frac{15}{11} = \frac{4}{11} + \frac{11}{11}$.

$$\begin{array}{r} 9 \frac{15}{11} \\ - 4 \frac{5}{11} \\ \hline 5 \frac{10}{11} \end{array}$$

EXAMPLE $9 \frac{2}{5} - 6 \frac{11}{15} =$

Write this: $9 \frac{2}{5} = 9 \frac{6}{15} = 8 \frac{21}{15}$
 $- 6 \frac{11}{15} = 6 \frac{11}{15} = 6 \frac{11}{15}$

$$\begin{array}{r} 8 \frac{21}{15} \\ - 6 \frac{11}{15} \\ \hline 2 \frac{10}{15} = 2 \frac{2}{3} \end{array}$$

Directions Subtract. Rename when necessary. Simplify your answers.

1. $12 \frac{5}{13}$
 $- 3 \frac{6}{13}$

7. $36 \frac{3}{14}$
 $- 4 \frac{6}{7}$

13. $25 \frac{1}{6}$
 $- 2 \frac{1}{4}$

19. 18
 $- 2 \frac{1}{5}$

2. $5 \frac{2}{7}$
 $- 3 \frac{4}{7}$

8. $45 \frac{1}{9}$
 $- 2 \frac{3}{10}$

14. $4 \frac{1}{6}$
 $- 2 \frac{3}{8}$

20. $17 \frac{2}{9}$
 $- 3 \frac{4}{8}$

3. $16 \frac{2}{3}$
 $- 5 \frac{3}{4}$

9. $4 \frac{2}{15}$
 $- 2 \frac{1}{5}$

15. $3 \frac{1}{3}$
 $- 2 \frac{4}{5}$

21. 8
 $- 2 \frac{1}{4}$

4. $18 \frac{1}{5}$
 $- 2 \frac{6}{7}$

10. $29 \frac{3}{16}$
 $- 4 \frac{5}{8}$

16. $1 \frac{7}{8}$
 $- \frac{8}{9}$

22. $15 \frac{3}{4}$
 $- 5 \frac{9}{10}$

5. $33 \frac{15}{18}$
 $- \frac{8}{9}$

11. $11 \frac{2}{11}$
 $- 3 \frac{8}{22}$

17. $27 \frac{5}{16}$
 $- 2 \frac{7}{8}$

23. $3 \frac{2}{9}$
 $- 2 \frac{1}{3}$

6. $41 \frac{7}{10}$
 $- 3 \frac{4}{5}$

12. $29 \frac{6}{31}$
 $- 4 \frac{21}{62}$

18. $4 \frac{1}{3}$
 $- 2 \frac{1}{2}$

24. $4 \frac{6}{7}$
 $- 3$



Multiplication of Decimals

EXAMPLE $31.2 \times 0.34 =$

Write this:

$$\begin{array}{r} 31.2 \\ \times \quad .34 \\ \hline 1248 \\ +936 \\ \hline 10.608 \end{array}$$

1 Decimal place
+ 2 Decimal places
3 Decimal places to be marked off in the product counting from right to left.

EXAMPLE $0.33 \times 0.005 =$

Write this:

$$\begin{array}{r} .33 \\ \times .005 \\ \hline 0.00165 \end{array}$$

Sometimes it becomes necessary to insert zeros at the left.

Directions Multiply.

1. $\begin{array}{r} 3.4 \\ \times 2.6 \\ \hline \end{array}$

4. $\begin{array}{r} 4.21 \\ \times 3.8 \\ \hline \end{array}$

7. $\begin{array}{r} 20.34 \\ \times 10.3 \\ \hline \end{array}$

10. $\begin{array}{r} .0037 \\ \times .019 \\ \hline \end{array}$

2. $\begin{array}{r} 71.8 \\ \times .29 \\ \hline \end{array}$

5. $\begin{array}{r} 10.8 \\ \times 1.71 \\ \hline \end{array}$

8. $\begin{array}{r} .234 \\ \times .008 \\ \hline \end{array}$

11. $\begin{array}{r} .00319 \\ \times .0084 \\ \hline \end{array}$

3. $\begin{array}{r} 3.02 \\ \times .12 \\ \hline \end{array}$

6. $\begin{array}{r} 4.501 \\ \times 2.3 \\ \hline \end{array}$

9. $\begin{array}{r} 1.03 \\ \times .009 \\ \hline \end{array}$

12. $\begin{array}{r} .0028 \\ \times .072 \\ \hline \end{array}$

Directions Write these in vertical form and multiply.

13. $2.034 \times 4.5 =$ _____

19. $0.934 \times 23.1 =$ _____

14. $4.9 \times 0.009 =$ _____

20. $0.0201 \times 0.039 =$ _____

15. $0.004 \times 0.24 =$ _____

21. $0.0031 \times 0.009 =$ _____

16. $49.5 \times 3.4 =$ _____

22. $10.07 \times 0.35 =$ _____

17. $3.405 \times 0.003 =$ _____

23. $129 \times 4.03 =$ _____

18. $0.00391 \times 0.019 =$ _____

24. $0.506 \times 0.0001 =$ _____



Using a Charge Account

EXAMPLE

Ryan has bought supplies for her floral shop on her credit card. She owes \$330.00. The minimum payment due is \$40.00. Ryan decides to pay \$80.00. That is more than her minimum so that she can pay it off faster. Ryan's interest charge per month is 0.9% of the unpaid balance. How much will she owe next month if she makes no new purchases?

Step 1 Subtract the payment from the balance to find unpaid balance.

$$\begin{array}{r} \$330 \text{ Balance} \\ - 80 \text{ Payment} \\ \hline \$250 \text{ New Balance} \end{array}$$

Step 2 Find the interest on the unpaid balance.

$$\begin{array}{r} \$250 \\ \times .009 \\ \hline \$2.25 \end{array}$$

Step 3 Add the interest to the unpaid balance to the new balance.

$$\begin{array}{r} \$250.00 \\ + 2.25 \\ \hline \$252.25 \end{array}$$

Ryan now owes \$252.25 on her charge account.

Directions Find the interest and new balance on these charge accounts.

	Balance	Payment	Unpaid Balance	Interest Rate per Month	Interest	New Balance
1.	\$100.00	\$20		1.2%		
2.	\$1,020.00	\$100		1.5%		
3.	\$450.00	\$45		1.6%		
4.	\$825.00	\$85		0.9%		
5.	\$56.00	\$2.80		1.4%		
6.	\$143.00	\$7.15		1.5%		
7.	\$253.00	\$12.65		1.6%		
8.	\$167.00	\$8.35		2.0%		
9.	\$52.70	\$2.64		1.8%		
10.	\$152.89	\$7.64		1.5%		
11.	\$376.14	\$18.81		1.3%		
12.	\$985.09	\$49.25		1.5%		
13.	\$552.17	\$27.61		1.6%		
14.	\$682.34	\$34.12		1.8%		
15.	\$710.02	\$35.50		0.9%		



Using a Layaway Plan

EXAMPLE

Mikkel and his brother Jay bought a house together. They want to invest in an energy saving refrigerator that costs \$899.99. They decide to use a five-month layaway. They made a 15% deposit. How much do they owe each month?

Step 1 Find the deposit. It is customary to round the amount to the nearest cent.

$$\begin{array}{r} \$900 \\ \times .15 \\ \hline \$135 \end{array}$$

Step 2 Find the remaining amount to be paid.

$$\begin{array}{r} \$900 \\ - 135 \\ \hline \$765 \end{array}$$

Step 3 Find the amount of each layaway payment.

$$\begin{array}{r} \$153 \\ 5 \overline{) \$765} \end{array}$$

Mikkel and Jay will make a \$135 deposit and pay 5 layaway payments of \$153. Then they will take their refrigerator home.

Directions Find the deposit and monthly payment for each layaway plan.

	Item	Price	Percent Deposit	Deposit Amount	Remainder Due	Number of Payments	Payment Amount
1.	Air Filter	\$249.99	20%			5	
2.	Water Heater	\$269.99	33%			10	
3.	Sewing Machine	\$175.00	30%			5	
4.	Down Comforter	\$159.00	10%			6	
5.	Clothes Dryer	\$499.99	15%			10	
6.	Winter Coat	\$174.99	15%			5	
7.	Set of Luggage	\$249.99	10%			5	
8.	Cooking Pan Set	\$179.99	12%			10	
9.	Mountain Bike	\$359.99	25%			5	
10.	DVD Player	\$229.99	50%			5	

