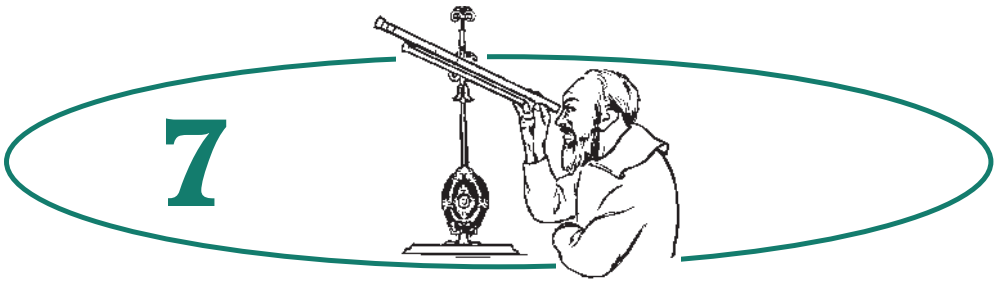


Buying From a Menu

Granny's Poultry Plant serves inexpensive lunches to its employees. Study the menu for Thursday.

Carol chose broccoli-cheese soup, a medium chef salad, and a cup of coffee for her lunch. Sales tax is 2%.

a. Find the cost of the meal without tax. $4.20

b. Find the total cost with tax. $4.28

a.
$0.95
2.25
+ 1.00
$4.20

b.
$4.20
× 1.02
840
42000
$4.2840 ≈ $4.28

Mr. Miers, a senior, chose a ham and cheese sandwich, a small vegetable plate with dip, cherry pie, and a cup of coffee. Granny's Poultry Plant gives a 10% discount for seniors. The sales tax is 2%.

a. Round the price of each item Mr. Miers chose to the nearest dollar and estimate how much his meal will cost. $4.00

b. Find the actual cost of the meal without tax. $3.95

c. Find the cost with the 10% discount. $3.56

d. Use the discount price to calculate the cost of the meal with tax. $3.63

a.
$1.00
1.00
1.00
+ 1.00
$4.00

b.
$1.15
0.55
1.25
+ 1.00
$3.95

c.
$3.95
×0.90
$3.555 ≈ $3.56

d.
$3.56
×1.02
712
35600
$3.6312 ≈ $3.63

Granny's Poultry Plant

Soups (1 cup)	
Broccoli-cheese	$0.95
Beef and noodle	$1.20
Tomato	$0.75
Salads	
Small veg. plate with dip	$0.55
Small garden salad	$0.80
Medium chef salad	$2.25
Sandwiches	
Bacon, lettuce, tomato	$1.25
Ham and cheese	$1.15
Grilled hamburger	$1.30
Beverages	
Coffee	$1.00
Iced Tea	$1.20
Milk	$0.55
Soda (can)	$0.25
Desserts	
Cherry pie	$1.25
Ice cream cup	$0.50
Carrot cake	$0.50

1. Marla chose a medium chef salad, milk, and carrot cake. The cafeteria charges 2% sales tax.

a. What was the cost of the meal without tax? _____

b. What was the cost of the meal with tax? _____

2. Sharla and Victoria decided to share a dessert of carrot cake and ice cream and split the cost evenly between them. Sales tax was 2%.

a. What was the cost of the dessert without tax? _____

b. What was the cost with tax? _____

c. How much did each girl pay? _____

3. Mr. Mandar worked outside unloading the live poultry, so he was very hungry at noon. He ordered beef and noodle soup, a ham and cheese sandwich, a small vegetable plate, and a piece of pie with ice cream. Mr. Mandar got a 10% senior discount and paid 2% sales tax.

a. Round each price to the nearest dollar and estimate the cost of the meal. _____

b. Find the actual cost of the meal. _____

c. Find the cost with the 10% discount. _____

d. Use the discount price to calculate the cost of the meal with tax. _____

We Remember

Convert to mixed measures.

4. a. 77 oz = _____ lb _____ oz

b. 282 oz = _____ lb _____ oz

5. a. 200″ = _____′ _____″

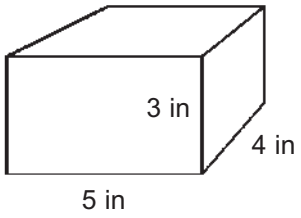
b. 915 min = _____ hr _____ min

6. a. 85 min = _____ hr _____ min

b. 51″ = _____′ _____″

Use the formula to find the volume.

7. _____



The asteroid belt has thousands of pebble-sized to mountain-sized rocks that orbit the sun in a gigantic ring.

8. A pack of 25 tracts costs $1.00. What is the price of one tract in the pack?

_____

9. A pack of 50 tracts costs $1.50. What is the price of one tract in the pack?

_____

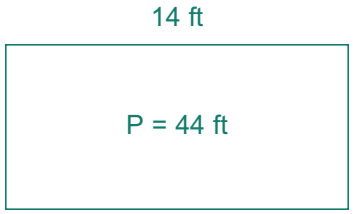
10. Sheldon deposited $50 in a savings account at 3% interest for 1 year.

a. How much interest did he earn? _____

b. How much was in his account at the end of the year?

_____

Use the perimeter formula to find the width.



11. The rectangle is _____ wide.

+ − × ÷ Skill Builders

Round to the nearest hundredth.

12. a.
$$\begin{array}{r} 20{,}834 \\ -\,19{,}427 \\ \hline \end{array}$$

b. $5\frac{1}{4} \times 1\frac{3}{7} \times 2 =$ _____

c. $4.6\overline{)0.9}$

Identify each set as *finite* or *infinite.*

13. Set A = (all numbers) _____

14. Set B = (factors of 12) {1, 2, 3 . . .12} _____

15. Set C = (factors of 20) {1, 2, 4 . . .20} _____

16. Set D = (all positive numbers) _____

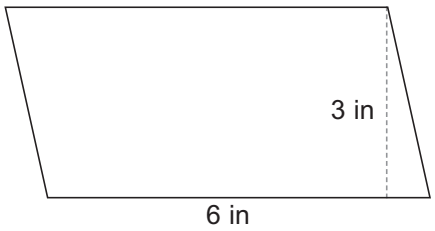
Multiply to find the number.

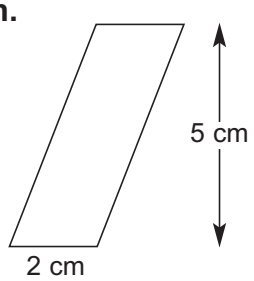
17. a. $2^6 =$ _____ **b.** $3^5 =$ _____ **c.** $4^5 =$ _____

Solve and check. ☑ ☑

18. a. $22 = 3a - 8$ **b.** **c.** $42 = 3b + 21$ **d.**

Use the formula to find the area of each parallelogram.





19. a. _____ **b.** _____

Mastery Drill

20. **a.** The fraction for $0.1\overline{6}$ is _____. **b.** The fraction for $0.\overline{3}$ is _____.

21. **a.** The fraction for $0.8\overline{3}$ is _____. **b.** The fraction for $0.\overline{6}$ is _____.

22. **a.** The decimal for $\frac{1}{2}$ is _____. **b.** The decimal for $\frac{1}{4}$ is _____.

23. **a.** 1 $yard^3$ = _____ $feet^3$ **b.** The decimal for $\frac{3}{4}$ is _____.

24. The formula for the area of a circle is _____.

25. The three dimensions of a solid are _____, _____, and _____.

Substitute 8 for *n*, then simplify each expression.

26. **a.** $\frac{56}{n}$ **b.** $3n + 8 - n$ **c.** $11n$

Use the menu on page 25 to do the following.

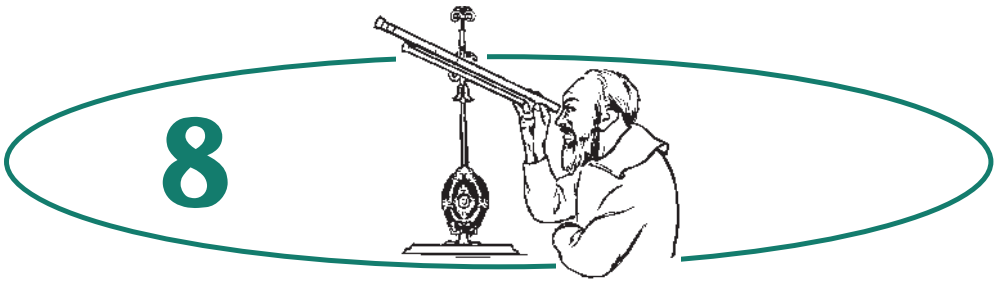
27. For lunch, Jotham chose tomato soup, a grilled hamburger, a can of cola, and cherry pie. The cafeteria charged 2% sales tax.

a. What was the cost of the meal without tax? _____

b. How much did it cost with tax? _____

28. Ralph has $3.00 cash to spend for lunch. Can he get the broccoli-cheese soup, a cup of coffee, and a bacon, lettuce, tomato sandwich?

_____



8

Writing Equations From Words

When we are translating into math language, the words *a number* represent a variable (n).

Three added to *a number* equals nine. $n + 3 = 9$

Six added to four times *a number* equals fourteen. $4n + 6 = 14$

Seven less than five times *a number* equals three. $5n - 7 = 3$

Translate into equations.

1. The quotient of eight and a number is two. _____
2. Twenty-eight divided by a number, plus two equals six. _____
3. Seven subtracted from a number is one. _____
4. The product of four and a number, less five is eleven. _____
5. Twice a number increased by six equals twenty-two. _____

Translate into equations. Then solve and check. The first one is started for you.

6. Eight times a number plus four equals twenty.

   a. $8n + 4 = 20$ **b.** ☑

7. Fifteen less than six times a number is nine.

   a. **b.** ☑

We Remember

8. Mrs. Schrock bought a double-dip cone for herself, a single-dip cone for her toddler, and a gallon of ice cream to take home to the family. The store charges 3% sales tax.

a. Round each price to the nearest dollar and estimate the cost of the ice cream. _____

b. What was the actual cost of the ice cream without tax? _____

c. How much did it cost with tax? _____

Ike's Ice Cream

Cones	Single dip	$0.99
	Double dip	$1.29
	Triple dip	$1.49
Cups	$\frac{1}{2}$ cup	$0.75
	1 cup	$1.25
Tubs	Pint	$1.95
	Quart	$3.59
	Gallon	$5.99

9. One day on Jupiter is only 10 earth hours long because of its rapid rotation. One day on Venus lasts 243 earth days because of its slow rotation. How many days does Jupiter have while Venus has only one? Round to the nearest whole day.

_____

Solve. Carry smaller units over to larger units when possible.

10. a.
$$\begin{array}{r} 38 \text{ min} \\ \times \quad 4 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 3' \quad 10'' \\ \times \quad 10 \\ \hline \end{array}$$

11. a.
$$\begin{array}{r} 3 \text{ lb} \quad 10 \text{ oz} \\ \times \quad 15 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 3 \text{ lb} \quad 10 \text{ oz} \\ 3 \text{ lb} \quad 10 \text{ oz} \\ + \quad 3 \text{ lb} \quad 10 \text{ oz} \\ \hline \end{array}$$

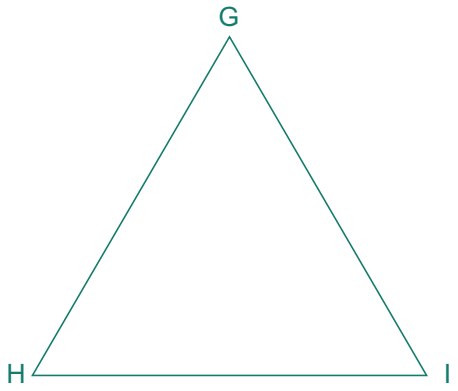
+ − × ÷ *Skill Builders*

Use a bar for the repeating decimal.

12. a.
$$\begin{array}{r} 0.89 \\ \times\ 0.24 \\ \hline \end{array}$$

b.
$$\begin{array}{rrrr} & 22 & \text{lb} & 5\ \text{oz} \\ - & 3 & \text{lb} & 12\ \text{oz} \\ \hline \end{array}$$

c. $3.6\overline{)0.5}$



Measure each angle of the triangle.

13. ∠G _____

14. ∠H _____

15. ∠I _____

Underline the word which classifies △GHI.

16. right equilateral scalene isosceles

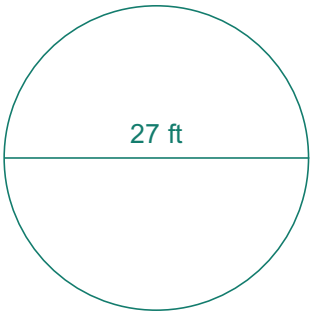
Write an expression for each, using an exponent.

17. a. Sixteen cubed _____

b. 2 • 2 • 2 • 2 • 2 • 2 • 2 • 2 _____

Use the formula to find the circumference.
Use 3.14 for pi.

18. _____



Convert to mixed measures.

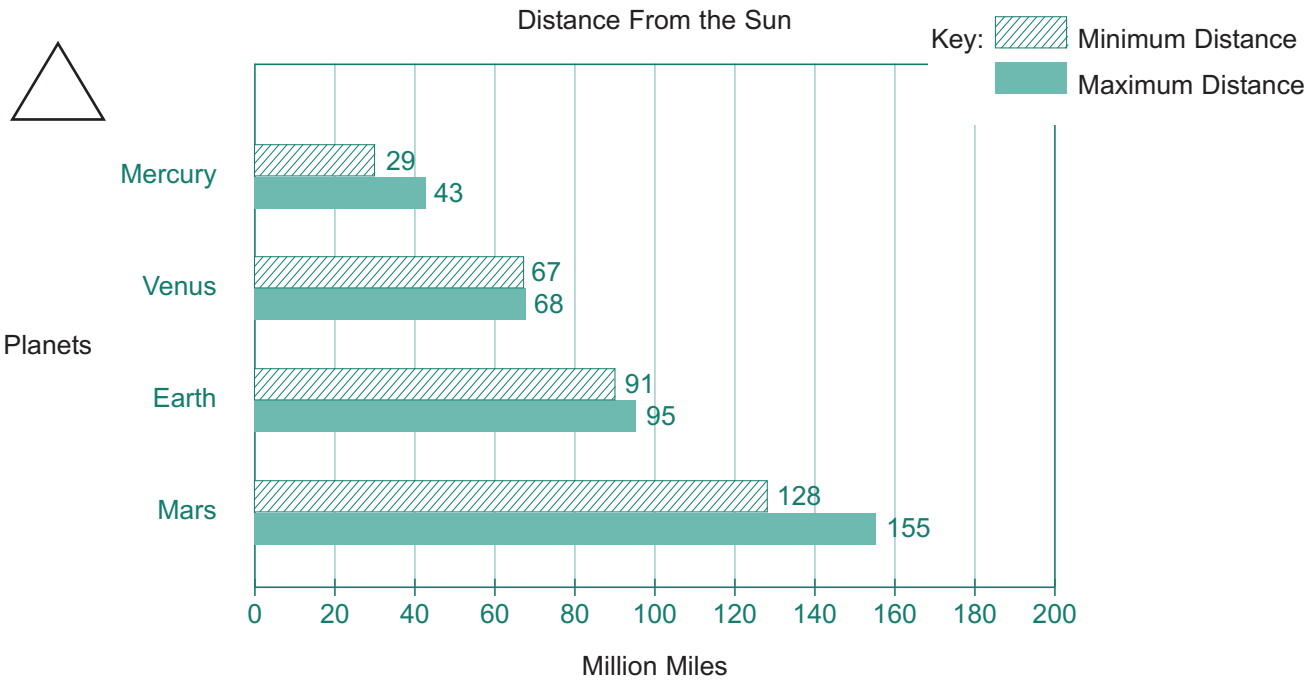
19. a. 99 oz = _____ lb _____ oz

b. 555 min = _____ hr _____ min

20. a. 110″ = _____′ _____″

b. 340 min = _____ hr _____ min

Planets orbit the sun in elliptical (oval) paths rather than circular paths. Therefore, the planets move closer to (or farther away from) the sun during their orbits. The graph shows how much four planets vary in their distance from the sun during their orbits.



Answer the questions about the graph.

21. What is the difference between Earth's minimum distance from the sun and Mercury's minimum distance from the sun?

_____

22. What is the difference between Earth's maximum and minimum distance from the sun?

_____

23. Which of the planets shown has the greatest difference between its maximum and minimum distance from the sun?

_____

24. Which of the planets shown has the least difference between its maximum and minimum distance from the sun?

_____

Mastery Drill

25. **a.** Diameter is _____ times the radius. **b.** Radius is _____ of the diameter.

26. A right triangle has one _____° angle.

27. The short version of the percent proportion is _____.

28. An acute angle measures between _____° and _____°.

29. An obtuse angle measures between _____° and _____°.

30. The three angles of a triangle measure a total of _____°.

31. The four angles of a quadrilateral measure a total of _____°.

32. The formula for the circumference of a circle is _____.

Translate into equations.

33. The product of three and a number is ninety. _____

34. Six divided into twelve reduced by a number is twenty. _____

Mars is known as the red planet because it contains iron oxide, (or rust as we know it). It has a canyon, Valles Marineris, which is 4 times deeper and 10 times wider than the Grand Canyon.