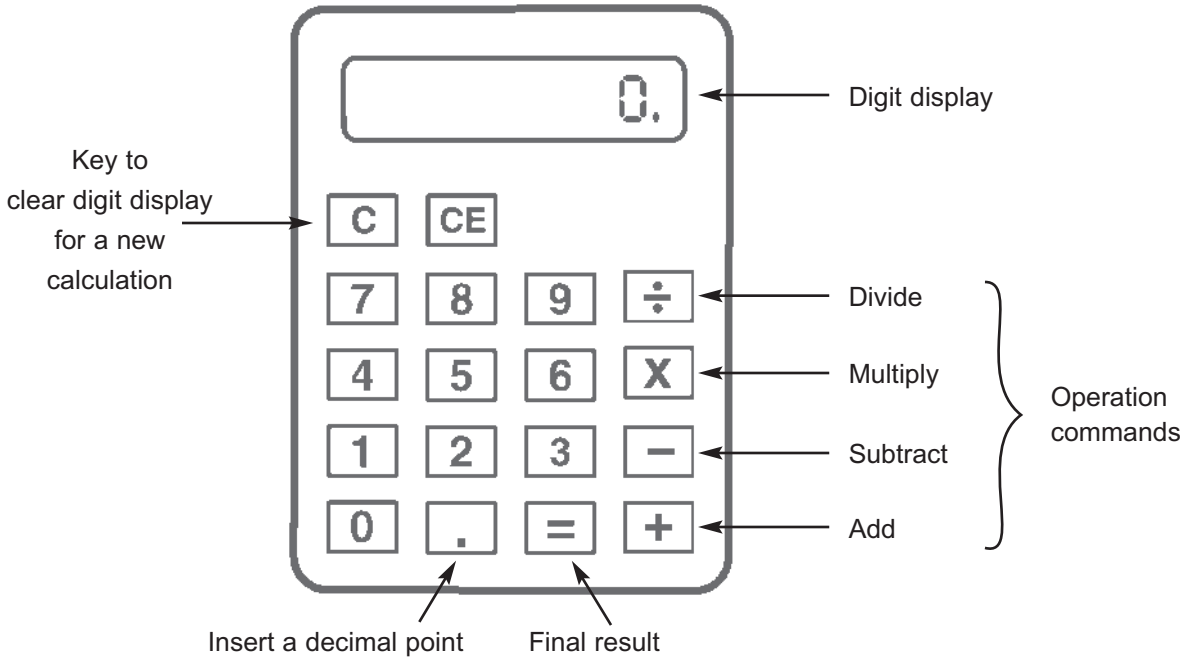
12

Using a Calculator



A calculator is useful when working with long lists of numbers or when solving a problem with many steps.

Jon earns money helping his neighbors with their lawn and yard chores. Jon tithes (gives a tenth of his earnings to God in offerings through his church) each month before he decides what to do with the rest. His father recently bought him a new bike, but Jon is responsible for any repairs or extra things he wants to buy for it. Jon also pays for his puppy's food and vet care. If Jon has money left over after his expenses are paid, he puts it into his savings account.

Month	Tithe	Bike	Puppy	Savings
April	$5.50	$20.79	$15.29	$13.42
May	$7.00	$11.99	$39.59	$11.42
June	$4.00	$17.95	$15.89	$ 2.16
July	$4.25	$22.75	$10.59	$11.84
Aug	$7.50	$31.69	$27.89	$ 4.91
Sept	$5.75	$ 4.52	$20.75	$32.23

Use only your calculator and the table on page 41 to answer the following questions.

1. How much did Jon earn in April? _____
2. What was Jon's average monthly cost for the care of his puppy? _____
   Round to the nearest cent.
3. Jon wanted some extra things for his bike. He bought a mirror in May, a new tire in June, and a rear basket in July. What did he spend on his bike for those three months?
   _____
4. How much did Jon save from April through September? _____
5. Jon's mother loves flowers. He bought 50 tulip bulbs for $25.99 for his mother's birthday on Oct. 1. How much did he have left in his savings account? _____
6. How much did Jon tithe from April through September? _____

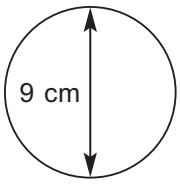
We Remember

Solve and check.

7. **a.** $n + 3 = 9$ **b.** ☑ **c.** $9 = n - 6$ **d.** ☑

Write the formula and find the circumference.

8. _____



When traveling from one country to another, we must exchange our currency (coins and paper money) for the currency of the country we are visiting if we wish to buy things.

Round to the nearest . . .

9. thousandth. **a.** 23.5677 _____ **b.** 1.2347 _____
10. one. **a.** 476.54 _____ **b.** 0.982 _____
11. tenth. **a.** 476.54 _____ **b.** 0.982 _____

+ − × ÷ Skill Builders

Annex zeros to complete division.

Check using digit sums.

× ○ = □

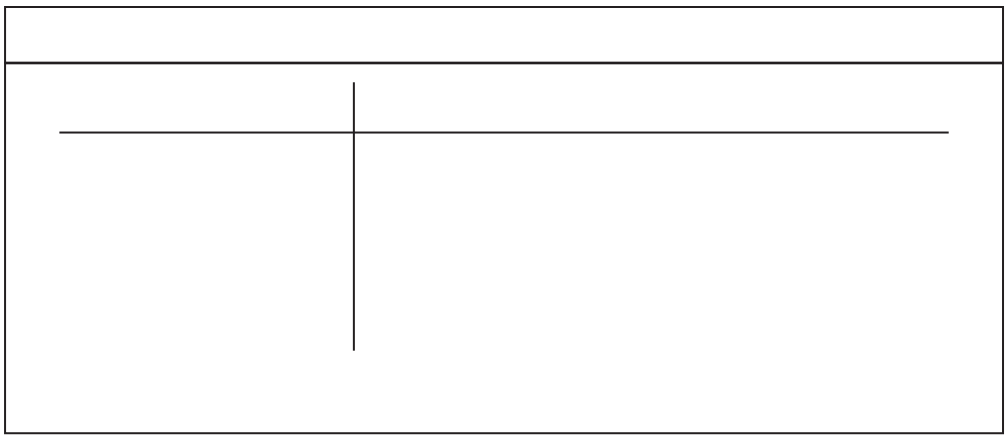
○

12. a. $\frac{9}{10} \div \frac{4}{5} =$ _____ **b.** $12\overline{)5.4}$ **c.** $36\overline{)828}$ □

Janet surveyed 50 people to discover what kind of fresh fruit they liked best. The tally chart shows the results. Organize the information from the tally chart on a pictograph. Draw one 🧍 for every five people. Give the graph a title and key.

Favorite fruit	Tally	Total
oranges	𝍸 𝍸 𝍸 𝍸	20
kiwi	𝍸	5
bananas	𝍸 𝍸 𝍸	15
papaya	𝍸 𝍸	10

△ **13.**



Set up a proportion and solve.

14. A Boeing 767 flew at a speed of 925 km per hour across North America. How far did it fly in 2.5 hours?

n = _____ _____

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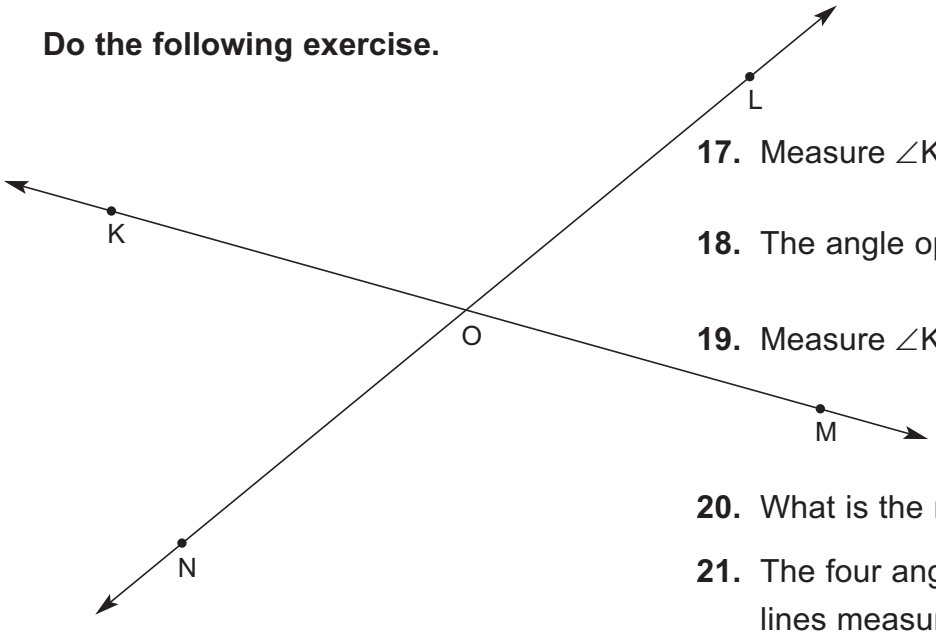
15. a. 1 kilometer = _____ meters **b.** 1 liter = _____ milliliters

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

Lesson 12

Do the following exercise.



17. Measure ∠KOL. _____

18. The angle opposite ∠KOL is _____.

19. Measure ∠KON. _____

20. What is the measure of ∠LOM? _____

21. The four angles formed by the intersecting lines measure a total of _____.

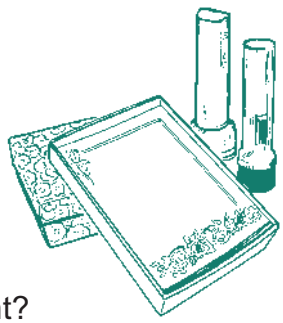
22. Jon's mother is planning a small circular pool edged with rocks and ferns for one corner of her flower garden. If the diameter of the pool is 5 feet, what is its circumference?

_____

Use a calculator to solve the problem.

23. What is the sum of the first ten odd numbers? _____

24. Miss Albright bought a stationery set for each of the four girls in her sixth grade class as awards for improving their math scores. Each stationery set cost $3.75. How much did the stationery sets cost? _____



25. Miss Albright bought small flashlights for each of the five boys. Each flashlight cost $4.29. How much did the flashlights cost?

_____

26. What was the average amount Mrs. Albright spent for each student?

_____

13

Repeating Decimals

You have learned to convert fractions and mixed numbers to decimals by dividing the numerator by the denominator. Sometimes when you divide you could go on forever.

$$\begin{array}{r} 0.666 \\ 3\overline{)2.000} \\ \underline{10} \\ 20 \\ \underline{18} \\ 20 \\ \underline{18} \\ 2 \end{array}$$

Decimal could go on forever!

To convert $\frac{2}{3}$ to its equivalent decimal, divide 2 by 3. Annex zeros as needed.

The decimal 0.666 is a repeating decimal. It could go on forever.

You can use a bar to show that the decimal repeats. $0.666 = 0.\overline{6}$

Study the example.

$$\begin{array}{r} .8333 \\ 6\overline{)5.000} \\ \underline{48} \\ 20 \\ \underline{18} \\ 20 \\ \underline{18} \\ 2 \end{array}$$

The decimal 83.33 is a repeating decimal. Notice the 3 in the ones place and the 3 in the tenths place. Repeating decimals start only with digits to the right of the decimal point.

The repeating decimal for 83.33 is $83.\overline{3}$.

When the decimals in the quotient repeat, the remainders will follow the same pattern for as long as you divide. Study the examples.

$$\begin{array}{r} 5.555 = 5.\overline{5} \\ 9\overline{)50.000} \\ \underline{45} \\ 50 \\ \underline{45} \\ 50 \\ \underline{45} \\ 5 \end{array}$$

The first 5 is on the left of the decimal point. It is not a repeating decimal.

Remainders that repeat: 5, 5, 5

$$\begin{array}{r} 0.1818 = 0.\overline{18} \\ 11\overline{)2.0000} \\ \underline{11} \\ 90 \\ \underline{88} \\ 20 \\ \underline{11} \\ 90 \\ \underline{88} \\ 2 \end{array}$$

Remainders that repeat: 9, 2, 9, 2

Lesson 13

Convert the fractions and mixed numbers to decimals. Divide until you can see the repeating pattern. Annex as many zeros as needed. Rewrite the quotient with a bar to show the digits that repeat. The first one shows you how.

1. a. $\frac{1}{3}$ = $0.\overline{3}$ **b.** $\frac{5}{6}$ = _____ **c.** $2\frac{4}{9}$ = _____

```
  0.333
3)1.000
  9
  10
   9
   10
    9
    1
```

We Remember

Answer the questions.

2. Mr. Hofer bought 1,848 kg of hay to feed his 4 range horses. If the hay was divided equally among the four horses, how many kg did each horse eat? _____

3. If each horse eats 6 kg per day, how many days will the hay last? _____

4. How many weeks is this? _____

Copy and solve. Annex zeros as needed. Simplify if possible.

5. a. $3.67 + $48 + $0.86 = _____ **b.** 900 – 862.346 = _____

+ − × ÷ Skill Builders

6. a. $6\frac{1}{3} \times \frac{3}{5} =$ _____ **b.** $3\frac{1}{3} \times 2\frac{2}{5} =$ _____ **c.** $2\frac{1}{5} \div 1\frac{5}{6} =$ _____

Solve and check.

7. a. $n - 7 = 8$ ☑ **b.** ☑ **c.** $16 = n + 7$ **d.**

Use the chart to convert the metric units.

kilo	hecto	deca		deci	centi	milli

8. a. 50 kL = _____ hL **b.** 50 kL = _____ L **c.** 75 L = _____ hL

Write the numbers. Use proportions if necessary.

9. a. 4 feet = _____ inches **b.** 4 yd = _____ in

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10. 1 cubic centimeter = _____ milliliter

11. a. 1 cup = _____ fluid ounces **b.** 1 fluid ounce = _____ tablespoons

12. The four angles formed by a pair of intersecting lines measure a total of _____°.

13. Rachel's mother had $125 in cash before she went shopping. She spent $23.27 for gasoline, $28.10 for fresh poultry, $22.77 for groceries, and $32.49 for school supplies. How much money did she have left? _____

14. If Rachel's mother drives at an average speed of 50 miles per hour (60 minutes), and it is 20 miles to town, how long does it take to drive to town? Hint: Set up a proportion.

_____

Solve the logic problem.

15. If you double me and take away 4, you get 8. What number am I? _____

We can use proportions to change from one country's currency to another. In 2005, the U.S. dollar was worth about 1.15 Canadian dollars. The ratio was

$$\frac{\$1\text{ U.S.}}{\$1.15\text{ Canadian}}$$

?... Mental Math

16. $\frac{2}{5}$ of 45 → × 10 → – 20 → ÷ 4 → × 2 → – 9 = _____

17. **a.** $\frac{4}{11}$ of 66 is _____ **b.** $\frac{3}{4}$ of 28 is _____ **c.** $\frac{8}{9}$ of 72 is _____ **d.** $\frac{5}{8}$ of 8 is _____

Convert these fractions and mixed numbers to decimals.

All except one are repeating decimals. Write them with the repeating decimal bar.

18. **a.** $\frac{9}{11}$ = _____ **b.** $3\frac{6}{11}$ = _____ **c.** $\frac{2}{3}$ = _____ **d.** $4\frac{1}{2}$ = _____