

The following shows how place value and money are related.

ones	tenths	hundredths	thousandths
(dollars)	(dimes)	(pennies)	(tenths of a penny)

Write each fraction as a decimal and then say it.

1. $\frac{349}{1,000}$ _____

2. $\frac{6}{10}$ _____

3. $\frac{58}{100}$ _____

4. $\frac{27}{1,000}$ _____

5. $\frac{2}{10}$ _____

6. $\frac{9}{100}$ _____

7. $\frac{6}{1,000}$ _____

8. $\frac{71}{100}$ _____

9. $\frac{90}{100}$ _____

10. $\frac{843}{1,000}$ _____

11. $\frac{5}{10}$ _____

12. $\frac{4}{100}$ _____

13. $\frac{1}{1,000}$ _____

14. $\frac{45}{100}$ _____

15. $\frac{896}{1,000}$ _____

16. $\frac{58}{1,000}$ _____

Solve.

17. A large building has 1,000 windows, and 5 of the windows need to be replaced. What decimal represents the number of windows that need to be replaced?
- _____

18. At a reception, 23 of 100 pieces of wedding cake have been eaten. What decimal number represents the number of pieces of cake that have been eaten?
- _____

19. Jody made 10 party invitations. Yesterday she mailed 4 of them. What decimal represents the number of invitations that have been mailed?
- _____

20. There are 1,000 vehicles in a stadium parking lot; 422 of the vehicles are trucks. What decimal represents the number of vehicles that are trucks?
- _____

21. Mr. Chan handed out eight tenths of his flyers. Write a fraction and a decimal that represents the amount of the flyers that he handed out.
- _____

22. Jason has an album that holds 100 trading cards. He has 52 trading cards in the album. Write a fraction and a decimal that represent the amount of the album that is filled.
- _____

Remembering**Add.**

1. $\frac{1}{3} + \frac{1}{7}$

2. $\frac{1}{5} + \frac{8}{15}$

3. $\frac{3}{8} + \frac{1}{4}$

Subtract.

4. $\frac{4}{5} - \frac{1}{8}$

5. $\frac{5}{6} - \frac{5}{9}$

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

Add or Subtract.

7.
$$\begin{array}{r} 5 \\ - 3\frac{5}{8} \\ \hline \end{array}$$

8.
$$\begin{array}{r} 8\frac{1}{5} \\ + 5\frac{4}{7} \\ \hline \end{array}$$

9.
$$\begin{array}{r} 11\frac{2}{5} \\ - 6\frac{3}{20} \\ \hline \end{array}$$

Solve.*Show your work.*

10. Kennedy served $15\frac{3}{4}$ hours of volunteer service last month. She served $21\frac{5}{6}$ hours of volunteer service this month. How many more hours did she serve this month?
- _____

11. **Stretch Your Thinking** Draw a diagram that shows 0.5 and $\frac{1}{2}$ are equivalent.

2-2 Homework

Name _____

Date _____

Write a decimal number for each word name.

1. nine thousand, six hundred five and nine tenths

2. two hundred ten thousand, fifty and nineteen hundredths

3. three tenths

4. seven thousandths

5. eight hundredths

Write each amount as a decimal number.

6. $\frac{602}{1,000}$ _____

7. $\frac{21}{100}$ _____

8. $4\frac{9}{10}$ _____

9. $14\frac{27}{100}$ _____

10. $35\frac{712}{1,000}$ _____

11. $9\frac{5}{100}$ _____

12. $24\frac{13}{1,000}$ _____

13. $3\frac{68}{100}$ _____

14. $2\frac{1}{1,000}$ _____

15. $63\frac{7}{10}$ _____

16. $\frac{84}{1,000}$ _____

17. $29\frac{4}{1,000}$ _____

18. $8\frac{17}{1,000}$ _____

19. $\frac{6}{100}$ _____

20. $5\frac{106}{1,000}$ _____

21. $37\frac{3}{100}$ _____

Circle the value that is not equivalent to the other values.

22. 2.6

2.60

2.06

2.600

23. 4.07

4.070

4.70

4.0700

24. 65.800

65.8

65.08

65.80

25. 37.6

37.060

37.0600

37.06

26. Write three decimals that are equivalent.

27. Write the decimals in Exercise 26 as fractions.

Remembering

Add or Subtract.

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

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

$$\begin{array}{r} 3. \quad 9\frac{2}{3} \\ + 5\frac{7}{10} \\ \hline \end{array}$$

Solve.

Show your work.

4. Tanner earns 5 credits while playing on a math review website. He uses $2\frac{4}{15}$ credits while reviewing fractions. How many credits does he have left?
- _____

Estimate the sum or difference by rounding each mixed number to the nearest whole number. Then find the actual sum or difference.

$$\begin{array}{r} 5. \quad 15\frac{5}{6} \\ - 2\frac{1}{5} \\ \hline \end{array}$$

Estimate: _____

Difference: _____

$$\begin{array}{r} 6. \quad 8\frac{3}{5} \\ + 3\frac{1}{2} \\ \hline \end{array}$$

Estimate: _____

Sum: _____

Write each fraction as a decimal and then say it.

$$7. \quad \frac{44}{100} \quad \underline{\hspace{2cm}}$$

$$8. \quad \frac{13}{1,000} \quad \underline{\hspace{2cm}}$$

$$9. \quad \frac{3}{10} \quad \underline{\hspace{2cm}}$$

$$10. \quad \frac{541}{1,000} \quad \underline{\hspace{2cm}}$$

11. **Stretch Your Thinking** Draw two number lines that show 0.20 and $\frac{1}{5}$ are equivalent.

Homework

Write each amount as a decimal number.

1. 9 tenths _____

2. 52 thousandths _____

3. 8 hundredths _____

4. 3 cents _____

5. $\frac{65}{100}$ _____

6. $\frac{548}{1,000}$ _____

7. $\frac{12}{1,000}$ _____

8. $\frac{7}{100}$ _____

9. 4 thousandths _____

Circle the value that is *not* equivalent to the other values.

10. 0.47 0.470 0.407 0.4700

11. 0.5 0.50 $\frac{5}{10}$ 0.05

12. 0.801 0.810 0.81 0.8100

13. 0.700 0.70 0.07 0.7

14. 0.39 0.390 $\frac{39}{100}$ $\frac{39}{1,000}$

15. 0.04 0.40 0.040 0.0400

Compare. Write > (greater than) or < (less than).

16. 0.36 ○ 0.8

17. 0.405 ○ 0.62

18. 0.91 ○ 0.95

19. 0.45 ○ 0.4

20. 0.836 ○ 0.83

21. 0.299 ○ 0.3

22. 0.621 ○ 0.612

23. 0.7 ○ 0.07

24. 0.504 ○ 0.54

A store had the same amount of five fabrics. The chart shows the how much of each fabric is left. Use the data to answer each question.

25. The store sold the most of which fabric? Explain.

26. The store sold the least of which fabric? Explain.

27. The same amount of which fabrics is left? Explain.

Red fabric	0.510 yd
Blue fabric	0.492 yd
Yellow fabric	0.6 yd
White fabric	0.51 yd
Black fabric	0.48 yd

Remembering

Estimate the sum or difference by rounding each mixed number to the nearest whole number. Then find the actual sum or difference.

1. $3\frac{7}{8} + 4\frac{2}{3}$

Estimate: _____

Sum: _____

2. $7\frac{5}{8} - 1\frac{1}{2}$

Estimate: _____

Difference: _____

Solve. Explain how you know your answer is reasonable.

Show your work.

3. Eli practices for a piano recital $3\frac{3}{4}$ hours in one week. In the same week, he practices basketball $1\frac{2}{3}$ hours. How much longer does he practice for his piano recital?

Answer: _____

Why is the answer reasonable?

Write a decimal number for each word name.

4. six hundred two and six tenths

5. five thousandths

6. **Stretch Your Thinking** Draw two number lines that show 0.200 and $\frac{1}{5}$ are equivalent.

Homework

The chart at the right shows the time each member of a relay team ran during a race.

Use the data to answer each question.

Jack	47.51 sec
Dusty	47.49 sec
Brandon	47.6 sec
Raj	47.57 sec

1. How much longer did Jack run than Dusty?

2. How much time did it take Brandon and Raj to complete their two legs of the race combined?

3. Which two runners had the greatest difference in their running times? What is the difference?

Copy each exercise. Then add or subtract.

4. $0.9 + 0.06 =$ _____

5. $0.47 + 0.25 =$ _____

6. $0.56 + 0.91 =$ _____

7. $1.4 - 0.9 =$ _____

8. $5 - 1.5 =$ _____

9. $3.7 - 2.49 =$ _____

10. $0.08 + 0.6 =$ _____

11. $0.48 + 0.39 =$ _____

12. $19 + 1.04 =$ _____

13. $3 - 0.05 =$ _____

14. $4.09 - 0.2 =$ _____

15. $6.07 - 4 =$ _____

Remembering

Use benchmarks of 0, $\frac{1}{2}$, and 1 to estimate the sum or difference. Then find the actual sum or difference.

1. $\frac{7}{12} + \frac{5}{6}$

Estimate: _____

Sum: _____

2. $\frac{4}{9} - \frac{7}{18}$

Estimate: _____

Difference: _____

Solve. Explain how you know your answer is reasonable.

Show your work.

3. Jordan is making a beaded necklace. Two thirds of the beads she uses are red and $\frac{4}{21}$ of the beads are blue. She wants the rest to be white. What fraction of the beads should be white?

Answer: _____

Why is the answer reasonable?

Compare. Write $>$ (greater than) or $<$ (less than).

4. $0.2 \bigcirc 0.19$

5. $0.564 \bigcirc 0.602$

6. $0.08 \bigcirc 0.8$

7. **Stretch Your Thinking** Draw a diagram that shows $0.27 + 0.23 = \frac{1}{2}$.

Homework

Use the number 724,062.58 for each exercise.

1. Increase the number by 0.07. _____
2. Decrease the number by 100,000. _____
3. Add 8 in the hundreds place. _____
4. Subtract 2 from the hundredths place. _____

Copy each exercise. Then add or subtract.

5. $\$37 + 45¢ =$ _____
6. $\$82.06 + 25¢ =$ _____
7. $59¢ + \$4.23 =$ _____
8. $9\text{ m} + 0.05\text{ m} =$ _____
9. $92.24 + 3.6 =$ _____
10. $5\text{ m} + 0.08\text{ m} =$ _____
11. $231 + 0.26 =$ _____
12. $46.08 + 0.97 =$ _____
13. $6.4\text{ m} + 0.07\text{ m} =$ _____

Solve.

Show your work.

14. Lina is making curtains and a decorative pillow for her bedroom. She needs 0.75 meter of cloth for the pillow and 4.67 meters for the curtains. How much cloth does she need in all?

15. Olivia is buying a jacket that costs \$85.99. The sales tax that will be added to the cost of the jacket is \$5.16. What is the total cost of the jacket including sales tax?

Remembering

Compare. Write $>$ (greater than) or $<$ (less than).

1. $\frac{3}{7} \bigcirc \frac{3}{8}$

2. $\frac{1}{8} \bigcirc \frac{1}{6}$

3. $\frac{9}{11} \bigcirc \frac{7}{11}$

4. $\frac{4}{8} \bigcirc \frac{5}{6}$

5. $\frac{5}{6} \bigcirc \frac{3}{4}$

6. $\frac{7}{12} \bigcirc \frac{6}{7}$

Compare. Write $>$ (greater than) or $<$ (less than).

7. $0.17 \bigcirc 0.28$

8. $0.275 \bigcirc 0.109$

9. $0.29 \bigcirc 0.3$

10. $0.61 \bigcirc 0.58$

11. $0.81 \bigcirc 0.79$

12. $0.05 \bigcirc 0.5$

Add or subtract.

13.
$$\begin{array}{r} 0.8 \\ + 0.07 \\ \hline \end{array}$$

14.
$$\begin{array}{r} 0.22 \\ + 0.49 \\ \hline \end{array}$$

15.
$$\begin{array}{r} 2.6 \\ - 0.7 \\ \hline \end{array}$$

16.
$$\begin{array}{r} 5.6 \\ - 4.87 \\ \hline \end{array}$$

17.
$$\begin{array}{r} 7 \\ - 3.8 \\ \hline \end{array}$$

18.
$$\begin{array}{r} 0.96 \\ + 0.17 \\ \hline \end{array}$$

19. **Stretch Your Thinking** Write 4 different mixed decimals that equal 11 wholes. Draw a picture that shows you are correct.

Homework

Copy each exercise. Then subtract.

1. $6,000 - 348 = \underline{\hspace{2cm}}$ 2. $7,364 - 937 = \underline{\hspace{2cm}}$ 3. $50,821 - 3,617 = \underline{\hspace{2cm}}$

4. $720.95 - 286.4 = \underline{\hspace{2cm}}$ 5. $18,652 - 4.31 = \underline{\hspace{2cm}}$ 6. $350.6 - 176.54 = \underline{\hspace{2cm}}$

Solve.

Show your work.

7. Ahmad had a piece of rope that was 7.14 meters long. He cut off 0.09 meter to practice making knots. What was the length of the rope after the cut?

8. Natasha has a large collection of books. The thickest book measures 4.9 centimeters. The thinnest book measures 1.8 centimeters. What is the difference in thicknesses of those two books?

9. Yoshi saved \$1,238.46 for a vacation in Mexico. While in Mexico, she spent \$975. What amount of money did Yoshi not spend?

10. Tarantulas are one of the largest spiders on Earth. A tarantula can grow to be about 6.8 centimeters long. A spitting spider can grow to be about 0.9 centimeters long. About how much longer are the largest tarantulas than the largest spitting spiders?

Remembering

Write the mixed number as a fraction.

1. $1\frac{3}{5} =$ _____

2. $3\frac{1}{8} =$ _____

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

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

5. $1\frac{1}{3} =$ _____

6. $3\frac{5}{6} =$ _____

Add or subtract.

7.
$$\begin{array}{r} 6 \\ - 4.1 \\ \hline \end{array}$$

8.
$$\begin{array}{r} 0.32 \\ + 0.92 \\ \hline \end{array}$$

9.
$$\begin{array}{r} 4.5 \\ - 3.77 \\ \hline \end{array}$$

10. $44¢ + \$4.87 =$ _____

11. $32¢ + 66¢ =$ _____

12. $0.43 \text{ m} + 0.77 \text{ m} =$ _____

Solve.

Show your work.

13. When Erin got her puppy, Cuddles, he weighed 788.52 grams. He now weighs 2,313.6 grams more than he did when Erin first brought him home. How much does Cuddles weigh now?

14. **Stretch Your Thinking** Write a subtraction equation with a difference of 54.57. Then draw a number line to show between which two whole numbers the difference lies.

Homework

Use what you know about the Commutative Property to solve for n .

1. $26,184 + 1,546 = 1,546 + n$

$n = \underline{\hspace{2cm}}$

2. $17.39 + 12.58 = 12.58 + n$

$n = \underline{\hspace{2cm}}$

Regroup the numbers using the Associative Property. Then add.

3. $(\frac{7}{10} + \frac{3}{4}) + \frac{1}{4} =$

4. $1.02 + (0.98 + 4.87) =$

5. $2\frac{5}{8} + (\frac{3}{8} + \frac{2}{3}) =$

Use the Distributive Property to rewrite the problem so it has only two factors. Then solve.

6. $(25 \times 9) + (75 \times 9) =$

Group the numbers to make the addition easier. Then add.

7. 20,000

70,000

30,000

68,000

$+ 80,000$

8. 10.75

10.4

10.25

10.57

$+ 10.6$

9. 1.600

1.200

1.200

$+ 1.479$

10. $1\frac{7}{11}$

$5\frac{5}{6}$

$\frac{3}{11}$

$2\frac{1}{6}$

$+ \frac{1}{11}$

11. On Monday, Mr. Borden ran 4.6 miles in the morning and 0.78 miles that afternoon. On Tuesday, he ran 3.4 miles. How much did he run on Monday and Tuesday all together. Write an equation and solve.

Remembering

Solve.

Show your work.

1. Trent is making a week's worth of after-school snacks for himself and his sister. He uses $1\frac{1}{5}$ cups of mixed nuts and $2\frac{3}{4}$ cups of granola. How many cups did he use in all?
- _____

2. Shannon walked $4\frac{7}{8}$ miles and ran $3\frac{1}{2}$ miles during the week. How much further did she walk than run?
- _____

Add.

3. $\$54.25 + 55¢ =$ _____

4. $68¢ + 21¢ =$ _____

5. $92¢ + \$2.39 =$ _____

6.
$$\begin{array}{r} 0.06 \text{ m} \\ + 0.9 \text{ m} \\ \hline \end{array}$$

7.
$$\begin{array}{r} 0.44 \text{ m} \\ + 0.15 \text{ m} \\ \hline \end{array}$$

8.
$$\begin{array}{r} 5.6 \text{ m} \\ + 0.7 \text{ m} \\ \hline \end{array}$$

Subtract.

9.
$$\begin{array}{r} 70,763 \\ - 2,176 \\ \hline \end{array}$$

10.
$$\begin{array}{r} 6,982 \\ - 455 \\ \hline \end{array}$$

11.
$$\begin{array}{r} 5,000 \\ - 452 \\ \hline \end{array}$$

12.
$$\begin{array}{r} 46,872 \\ - 8.28 \\ \hline \end{array}$$

13.
$$\begin{array}{r} 561.5 \\ - 478.49 \\ \hline \end{array}$$

14.
$$\begin{array}{r} 676.54 \\ - 196.9 \\ \hline \end{array}$$

15. **Stretch Your Thinking** Use decimals and fractions in the same equation showing the Commutative Property. Repeat for the Associative Property.
- _____
- _____

Homework

Round to the nearest whole number.

1. 8.36 _____

2. 18.7 _____

3. 9.831 _____

Round to the nearest tenth.

4. 24.316 _____

5. 5.28 _____

6. 23.017 _____

Round to the nearest hundredth.

7. 58.635 _____

8. 7.214 _____

9. 210.097 _____

Estimate each sum or difference.

10. \$46.78 - \$18.55 _____

11. 12.3 + 4.7 _____

12. 9.586 + 3.097 _____

Solve.

Show your work.

13. A decimal number changed to 23.7 after it was rounded. Give a decimal number that is less than 23.7 and another that is greater than 23.7 that each round to 23.7. Explain to what place each number was rounded.

14. When Marla rounded 19.95 to the nearest tenth, she found the number changed to 20. Is this correct? Explain.

15. Peter decided that the total cost for a \$24.55 pair of jeans and a \$12.25 shirt was \$26.80. Was Peter's answer reasonable? Explain why or why not.

16. Biruk wants to buy a book for \$15.25 and a book for \$4.85. He wants to pay with one \$20 bill. Use estimation to decide if this is reasonable. Explain to what place value to round for an estimate that is useful in this situation.

Remembering

Solve.

Show your work.

1. Matt pours $3\frac{2}{3}$ cups of orange juice into a measuring cup from a large container. Then he pours $1\frac{1}{4}$ cups back into the container. How much orange juice remains in the measuring cup?
- _____

2. The school cafeteria manager orders $7\frac{3}{8}$ pounds of red onions and $10\frac{1}{2}$ pounds of yellow onions. How many pounds of onions did the manager order in all?
- _____

Subtract.

$$\begin{array}{r} 3. \quad 21,445 \\ - 3,548 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 980.3 \\ - 525.35 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 774.12 \\ - 248.8 \\ \hline \end{array}$$

Use the Distributive Property to rewrite each problem so it has only two factors. Then solve.

6. $(5 \times 600) + (5 \times 400) =$ _____

7. $(15 \times 6) + (85 \times 6) =$ _____

8. **Stretch Your Thinking** Name three decimals between 16.4 and 16.5. Draw a number line estimating the placement of all five decimals.
- _____

Homework

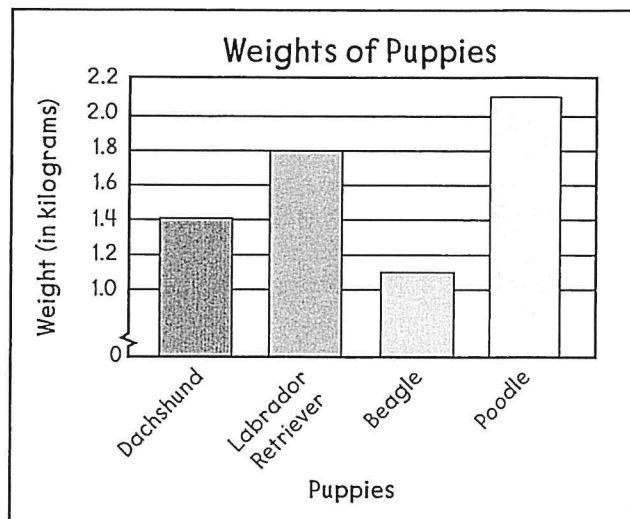
Jamal made a bar graph to compare the weights of 4 puppies in the animal shelter.

1. How much did the poodle weigh?

2. List the puppies in order from heaviest to lightest.

3. What is the combined weights of the Labrador retriever and the beagle?

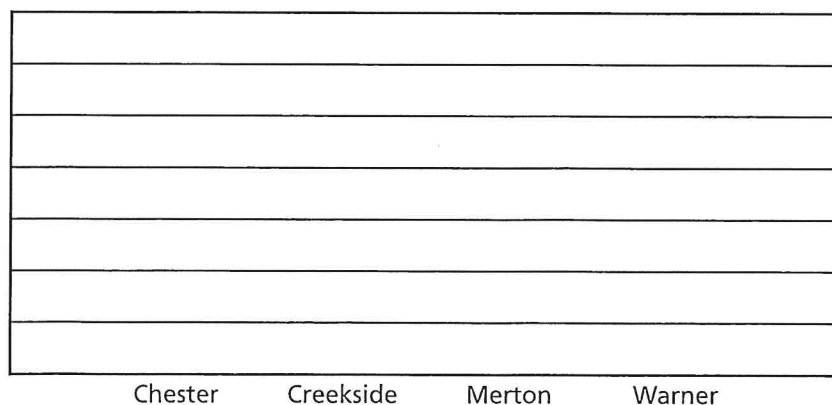
4. How much more did the Labrador retriever weigh than the dachshund?



The table shows the amount of rainfall this month in 4 different cities.

City	Rainfall Amounts
Chester	0.20 cm
Creekside	0.10 cm
Merton	0.05 cm
Warner	0.25 cm

5. Make a bar graph showing this information. Remember to give your graph a title, labels, and a scale.



Remembering

Multiply.

1. $45 \cdot 3 = \underline{\hspace{2cm}}$

2. $431 \cdot 6 = \underline{\hspace{2cm}}$

3. $17 \cdot 32 = \underline{\hspace{2cm}}$

4. $34 \cdot 67 = \underline{\hspace{2cm}}$

5. $1,509 \cdot 3 = \underline{\hspace{2cm}}$

6. $5,098 \cdot 7 = \underline{\hspace{2cm}}$

Regroup the numbers using the Associative Property. Then add.

7. $3.6 + (0.4 + 0.25) = \underline{\hspace{3cm}}$

8. $2\frac{6}{10} + (\frac{4}{10} + \frac{4}{5}) = \underline{\hspace{3cm}}$

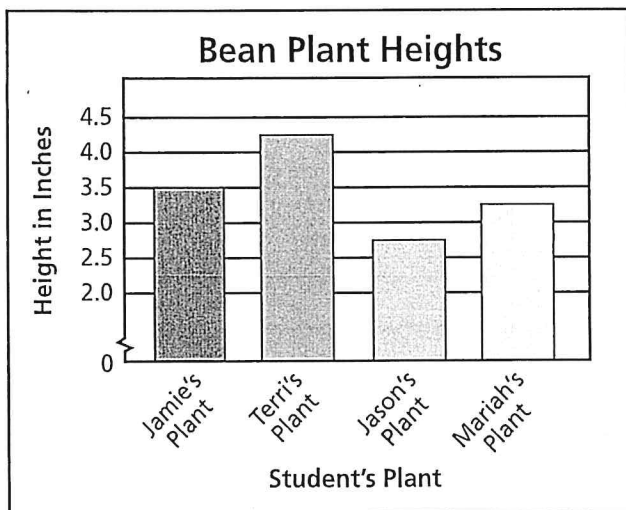
Estimate each sum or difference.

9. $7.535 + 2.706$

10. $\$27.89 - \12.64

11. $11.1 + 9.9$

12. **Stretch Your Thinking** The bar graph shows the heights of bean plants for four students in Mrs. Jarnigan's fourth-grade science class.



Write a two-step problem using the data from the graph.

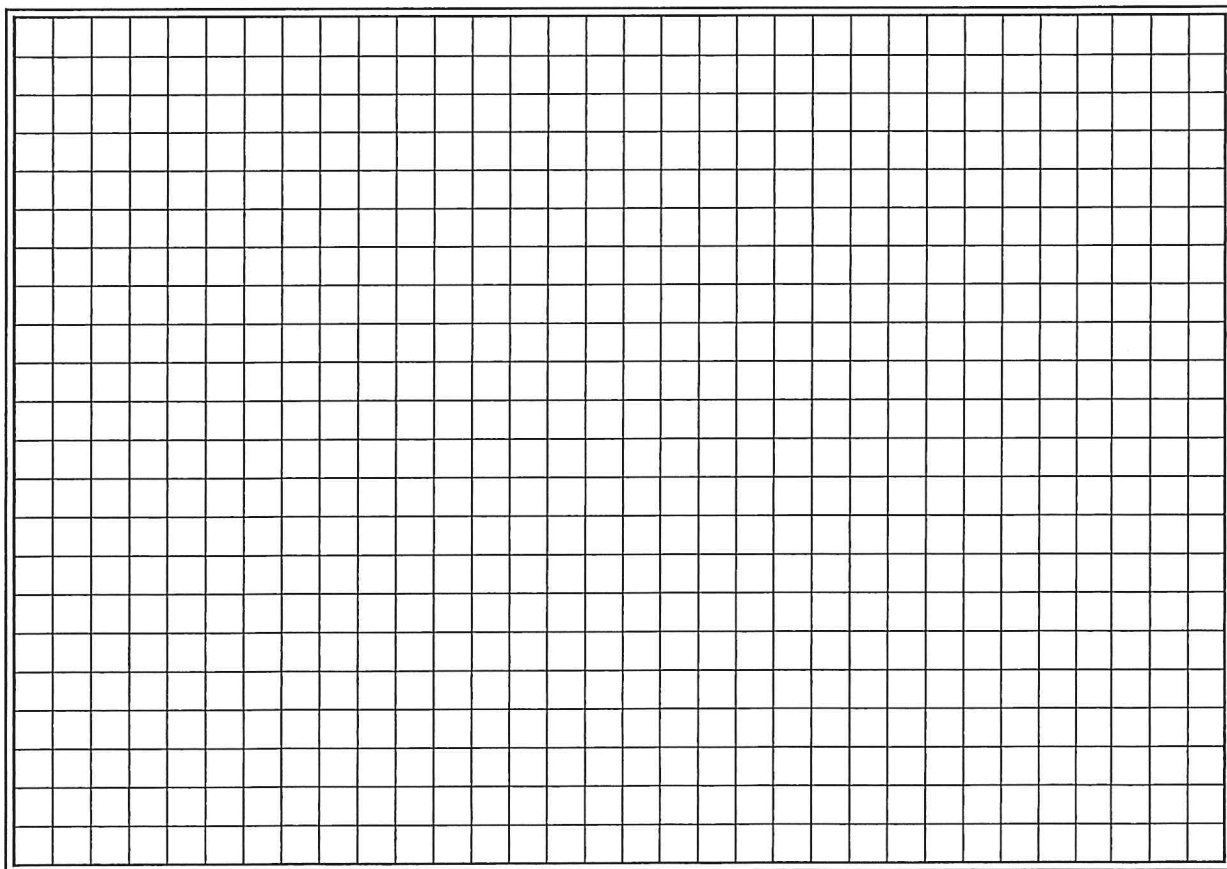
Homework

Look again at the table on Student Book page 54.

It shows how far from the sun the planets in our solar system orbit. For example, it shows that Jupiter (5.2 AU) orbits *about* 5 times farther from the sun than Earth (1 AU) because $1 \times 5 = 5$.

On a grid where 1 grid square = 1 AU, a dot for Earth would be 1 grid square away from the sun, and a dot for Jupiter would be about 5 grid squares away.

On the left side of the grid below, draw a dot to represent the sun. Then using the scale 1 grid square = 1 AU, draw and label a dot for each of the eight planets to show their relative distances from the sun.



Remembering

Solve.

Show your work.

1. During a movie, Kelley eats $12\frac{2}{7}$ ounces of snack mix and Madison eats $15\frac{3}{4}$ ounces of snack mix. How much did they eat altogether?
- _____

2. Caleb practices the piano for $15\frac{2}{3}$ minutes on Monday and $21\frac{1}{2}$ minutes on Tuesday. How much longer did he practice on Tuesday?
- _____

Estimate each sum or difference.

3. $13.2 + 52.7$

4. $19.454 + 1.897$

5. $\$33.03 - \10.78

Carly made a bar graph to show how far each of her toy cars traveled.

6. How much farther did Carly's yellow car travel than her blue car?
- _____

7. What is the greatest and least distance traveled? What is the difference between the two distances?
- _____

8. **Stretch Your Thinking** Brad has 32 ounces of mixed fruit to share with three friends. He gives 7.65 ounces to Carrie, 8.02 ounces to Joshua, and 6.88 ounces to Terrell. How much mixed fruit is left for Brad?
- _____

