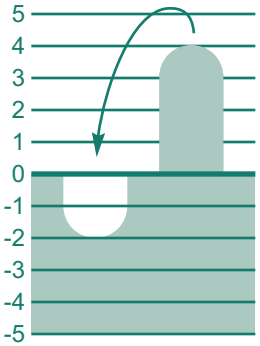
Speed Drill 11

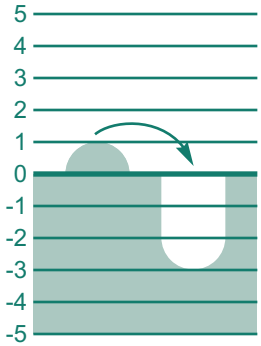
11 Combining Unlike Integers

Unlike integers are both positive and negative numbers together.

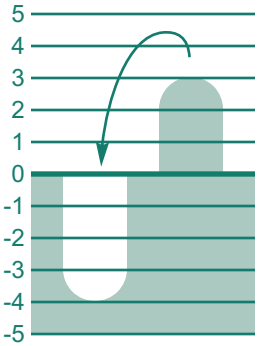
Combining positive and negative integers is like using the hills to fill up the holes. Sometimes there is more hole than hill, so we still end up with a hole. But if there is more hill than hole, the hole is filled, and some hill is left over.



-2 + 4 = 2
a hill of 2 left

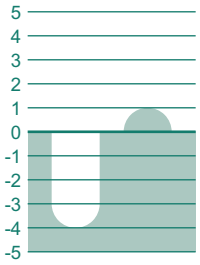


1 + (-3) = -2
a hole of 2 left

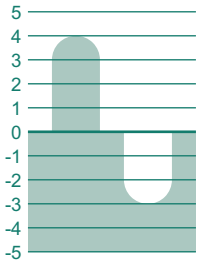


-4 + 3 = -1
a hole of 1 left

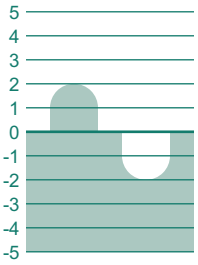
Use the illustrations to help you combine integers.



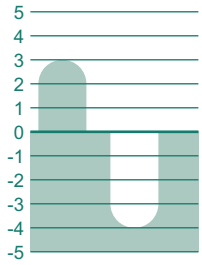
1. a. -4 + 1 = _____



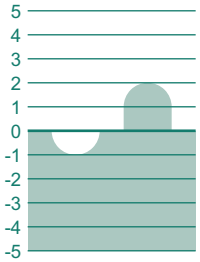
b. 4 + (-3) = _____



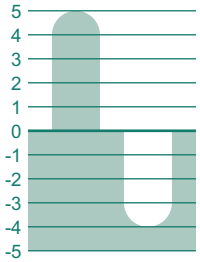
c. 2 + (-2) = _____



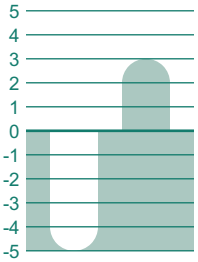
d. 3 + (-4) = _____



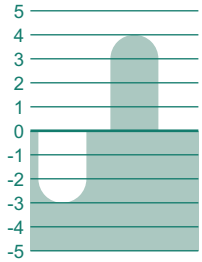
2. a. -1 + 2 = _____



b. 5 + (-4) = _____



c. -5 + 3 = _____



d. -3 + 4 = _____

Read these numbers to your teacher.

△**3.** 1.328 4.236 5.066 -438 -43 $\frac{2}{19}$

We Remember

Remember:
To multiply, move the decimal point to the right.

Multiply each number.

		× 10	× 100	× 1,000
4.	361.9	**a.** _____	**b.** _____	**c.** _____
5.	0.47	**a.** _____	**b.** _____	**c.** _____
6.	635	**a.** _____	**b.** _____	**c.** _____

Round to the nearest dollar.

7. a. $6.50 _____ **b.** $29.36 _____ **c.** $69.99 _____

Round to the nearest whole number to estimate.

8. a. estimate 9.768 × 4.2

_____ × _____ = _____

b. estimate 3.95 × 6.5

_____ × _____ = _____

Round to the nearest hundred.

9. a. 9,768 _____ **b.** 395 _____ **c.** 2,936 _____

Round to the nearest ten.

10. a. 4,697 _____ **b.** 695 _____ **c.** 565 _____

Round to the nearest hundred to estimate.

11. a. estimate 936 + 650 + 999

_____ + _____ + _____ = _____

b. estimate 565 – 497

_____ – _____ = _____

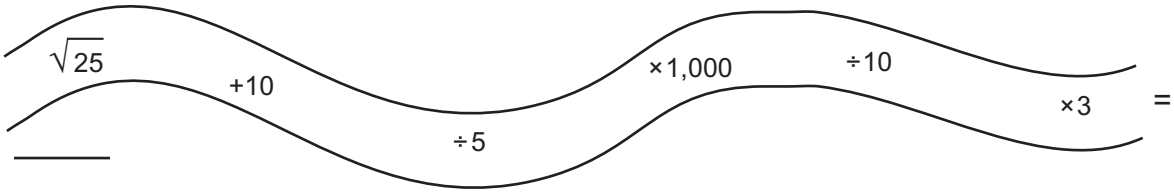
Lesson 11

Circle the greater number in each pair. Add or remove zeros as needed.

12. **a.** 7.5 0.72 **b.** 1.2 1.7 **c.** 0.34 0.4 **d.** 2.1 1.2

?... Mental Math

13.



Write these numbers.

14. Fifteen trillion, seven hundred million, forty-seven thousand, three hundred twenty

_____

15. One million, six hundred two thousand and twenty-five hundredths

_____

+ - ÷ × Skill Builders

16. **a.** $30\overline{)510}$ **b.** $50\overline{)1{,}532}$ **c.** $\begin{array}{r} 23.23 \\ -\ 16.52 \\ \hline \end{array}$ **d.** $\begin{array}{r} 3\frac{3}{8} \\ 1\frac{5}{8} \\ +\ \frac{7}{8} \\ \hline \end{array}$

17. **a.** $\begin{array}{r} 9.345 \\ -\ 6.589 \\ \hline \end{array}$ **b.** $7\overline{)3.5}$ **c.** $\begin{array}{r} 3.024 \\ \times\ \ \ \ 6 \\ \hline \end{array}$

Complete the sentences. **Note: These will be on your Mastery Drill in Lessons 14 and 16.**

18. The symbol for pi is _____.

19. The number for pi is _____.

20. Josinter's Uncle Silvester makes 890 shillings each week. He usually gives $\frac{1}{10}$ to God's work. This week he was able to give twice as much. How many shillings did he give to the Lord this week?

Answer: _____

Copy and solve.

21. 246 + 25 + 168 + 4

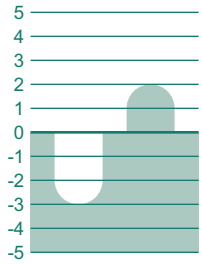
22. Which method did you use to check?

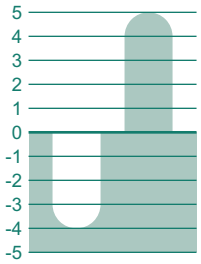
_____

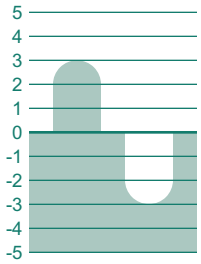
☑

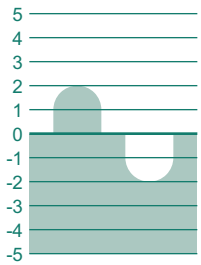
Many houses in Kenya are made of mud packed between slender wooden posts.

Combine the integers.









23. **a.** -3 + 2 = _____ **b.** -4 + 5 = _____ **c.** 3 + (-3) = _____ **d.** 2 + (-2) = _____

Speed Drill 12

12 Finding the Lowest Common Denominator

So far, you have learned to add and subtract fractions that have common denominators. You have also learned to change fractions having different denominators to equal fractions with a common denominator so you can add or subtract. Now you are ready to find a common denominator yourself when the denominators differ.

The best common denominator to use is the **lowest common denominator** (LCD). The LCD is simply the lowest common multiple (LCM) of all your denominators. Start with the largest denominator to be added. Count off its multiples until you find one that is a common multiple of each of the other denominators. Here's how:

Find the LCD of $\frac{1}{6}$, $\frac{5}{12}$, and $\frac{3}{8}$.

1. The largest denominator is 12, so start with 12. Begin counting its multiples.
2. 12 – a multiple of 6, but not of 8.
3. 24 – a multiple of both 6 and 8. So the LCD is 24.

Find the LCD of $\frac{3}{10}$ and $\frac{4}{5}$.

1. The largest denominator is 10, so start with 10. Begin counting its multiples.
2. 10 – a multiple of 5 also. So the LCD is 10.

Find the LCD.

1. a. The LCD of $\frac{5}{6}$ and $\frac{7}{10}$ is _____.　**b.** The LCD of $\frac{2}{3}$, $\frac{1}{6}$, and $\frac{1}{2}$ is _____.

2. a. The LCD of $\frac{1}{7}$ and $\frac{4}{5}$ is _____.　**b.** The LCD of $\frac{3}{4}$, $\frac{2}{3}$, and $\frac{1}{6}$ is _____.

3. a. The LCD of $\frac{5}{8}$ and $\frac{3}{12}$ is _____.　**b.** The LCD of $\frac{3}{16}$, $\frac{1}{4}$, and $\frac{5}{8}$ is _____.

Math 4 Borrowing to Subtract Fractions

When the top fraction is smaller than the bottom fraction in a subtraction problem, you must borrow.

You cannot subtract $\frac{4}{5}$ from $\frac{2}{5}$. Borrow 1 from 5.

Change the 1 to $\frac{5}{5}$ and add it to $\frac{2}{5}$.

The 5 becomes a 4 and the $\frac{2}{5}$ becomes $\frac{7}{5}$.

$$\frac{2}{5} + \frac{5}{5} = \frac{7}{5}$$

$$\begin{array}{r} \overset{4}{\cancel{5}}\,\overset{7}{\cancel{\frac{2}{5}}} \\ -\,2\,\frac{4}{5} \\ \hline 2\,\frac{3}{5} \end{array}$$

Subtract. Borrow as needed.

	$9\frac{1}{16}$	$7\frac{3}{7}$	$6\frac{2}{9}$	$8\frac{7}{12}$
4.	**a.** $-\ 4\frac{11}{16}$	**b.** $-\ 6\frac{5}{7}$	**c.** $-\ \frac{7}{9}$	**d.** $-\ 6\frac{11}{12}$

Circle the digit in the ten trillions place.

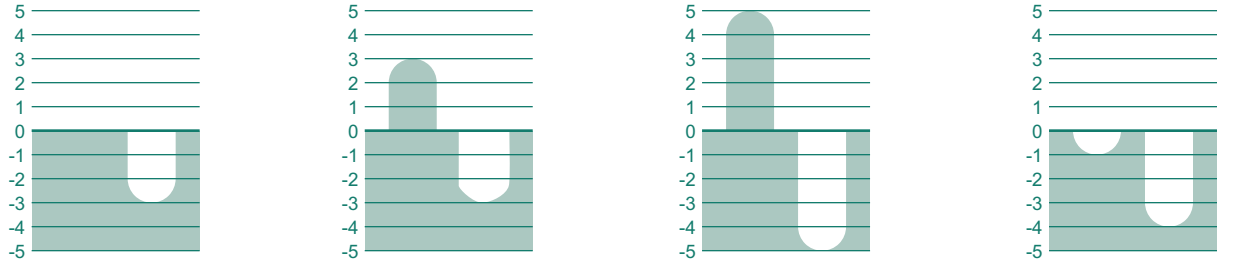
5. 329,164,008,766,153.04

Read these numbers to your teacher.

△**6.** 217,837,000,462,026 63,093,028,000 9,000,020,000

We Remember

Combine integers.



7. **a.** 0 + (-3) = ____ **b.** 3 + (-3) = ____ **c.** 5 + (-5) = ____ **d.** -1 + (-4) = ____

Write a fraction or mixed number for each decimal.
Write a decimal for each fraction or mixed number.

8. **a.** 15.006 _____ **b.** 23.16 _____ **c.** 12.9 _____

9. **a.** $\frac{732}{1{,}000}$ _____ **b.** $2\frac{69}{100}$ _____ **c.** $93\frac{7}{100}$ _____

Use the graph at the bottom of page 60 to answer the question.

10. My height is not a multiple of 10. I am not the second tallest tree. My name does not contain an odd number of letters. What tree am I? I am the _____ tree.

Lesson 12

11. Money in Kenya is based on the shilling. It takes about 75 shillings to equal one dollar. How many shillings would equal 25 dollars?

Answer: _____

12. The refreshing rains of rainy season are very welcome to the Luo people of Kenya. It rained 3.0 cm on Wednesday, 1.5 cm on Thursday, 1.0 cm on Friday, and 2.5 cm on Saturday. What was the average rainfall for those four days?

Answer: _____

Write the number and the decimal.

13. Four hundred ten million, six hundred fifty thousand, ninety-nine _____

14. Thirty-two thousandths _____

Between March and June in Kenya, it rains almost every afternoon.

Write the ratio.

15. Porridge is made by cooking 1 cup of oatmeal in 2 cups of water. What is the ratio of oatmeal to water? _____

Circle the most sensible distance.

16.	Height of a mountain	10,000 feet	10,000 inches	10,000 miles
17.	Length of a lake	5 m	5 km	5 cm

Simplify these expressions.

18. **a.** 5 + 4 × 6 **b.** 4 × (3 + 2) – 6 **c.** 9 – (2 × 4) + 6

+ − × ÷ Skill Builders

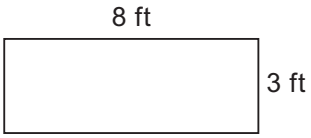
Write the remainder as a fraction.

19. **a.** $\begin{array}{r} 15 \\ -\ 6\frac{3}{7} \\ \hline \end{array}$ **b.** $\begin{array}{r} 5\frac{1}{6} \\ -\ 2\frac{5}{6} \\ \hline \end{array}$ **c.** $7\overline{)2{,}843}$

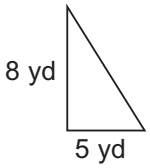
20. **a.** $\begin{array}{r} 20 \\ -\ 14\frac{1}{3} \\ \hline \end{array}$ **b.** $\begin{array}{r} 3\frac{1}{4} \\ -\ 1\frac{3}{4} \\ \hline \end{array}$ **c.** $\begin{array}{r} \frac{3}{8} = \frac{\ }{8} \\ +\ \frac{1}{2} = \frac{\ }{8} \\ \hline \end{array}$ **d.** $\begin{array}{r} \frac{5}{9} = \frac{\ }{9} \\ \frac{2}{3} = \frac{\ }{9} \\ +\ \frac{1}{3} = \frac{\ }{9} \\ \hline \end{array}$

Write the formula and find the area.

21. **a.**



b.



c.

Remember: To multiply, move the decimal point to the right.

Multiply each number.

		× 10	× 100	× 1,000
22.	93.4	**a.** _____	**b.** _____	**c.** _____
23.	0.65	**a.** _____	**b.** _____	**c.** _____
24.	0.392	**a.** _____	**b.** _____	**c.** _____

Find the LCD.

25. **a.** The LCD of $\frac{7}{12}$ and $\frac{5}{8}$ is ____. **b.** The LCD of $\frac{5}{9}$, $\frac{3}{5}$, and $\frac{1}{3}$ is ____.

26. **a.** The LCD of $\frac{7}{9}$ and $\frac{3}{4}$ is ____. **b.** The LCD of $\frac{5}{6}$, $\frac{7}{8}$, and $\frac{3}{4}$ is ____.

27. **a.** The LCD of $\frac{1}{6}$ and $\frac{3}{24}$ is ____. **b.** The LCD of $\frac{7}{8}$, $\frac{2}{3}$, and $\frac{1}{6}$ is ____.