

BLACKLINES

# PRACTICE BOOK



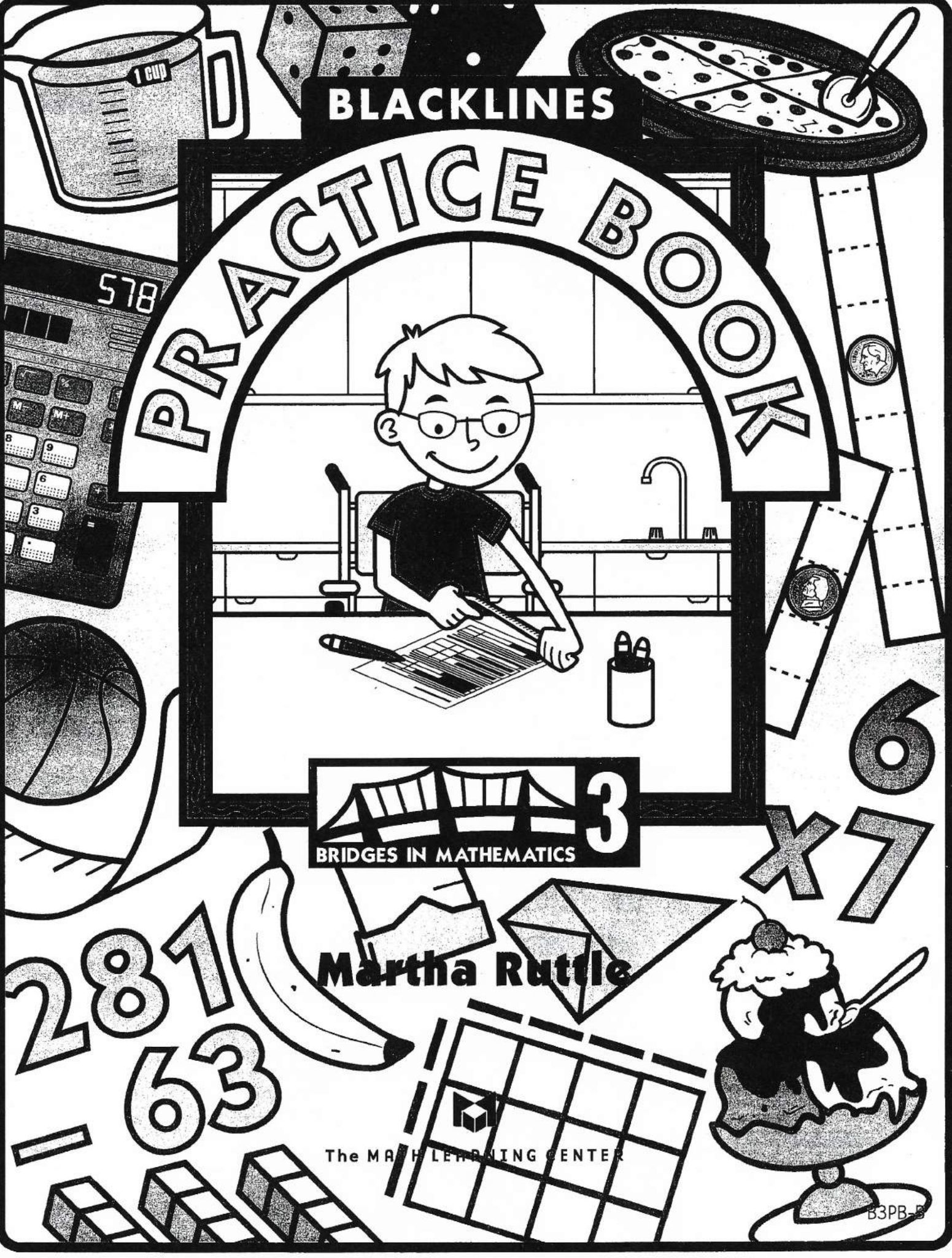
BRIDGES IN MATHEMATICS

3

Martha Ruttle

The MATH LEARNING CENTER

B3PB-B

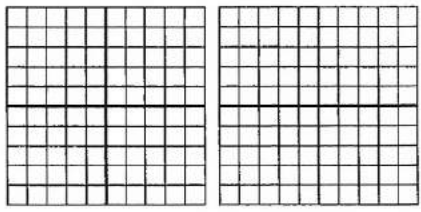
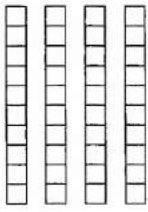

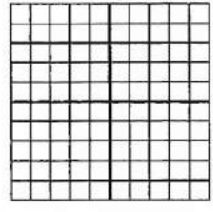
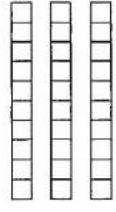
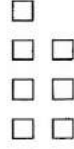
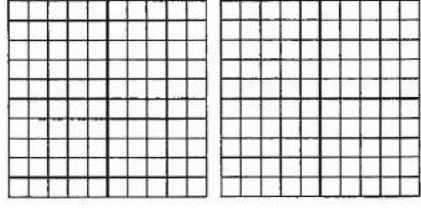
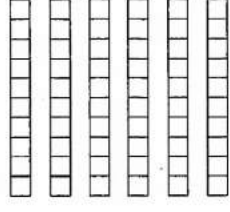



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## Expanded Notation 3-Digit Numbers

1 Write the value of the base ten pieces. Then write an equation to show the total value in expanded form.

	Hundreds	Tens	Ones	Equation
<b>ex</b>	200 	40 	5 	$200 + 40 + 5 = 245$
<b>a</b>				
<b>b</b>				



### CHALLENGE

2 Which has the greater total, part *a* or part *b*? Exactly how much more? Show all of your work.



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## Place Value Practice 3-Digit Numbers


1 Complete each equation by writing the number in standard form.

<b>example</b> $300 + 20 + 9 = \underline{329}$	<b>a</b> $800 + 40 + 5 = \underline{\hspace{2cm}}$
<b>b</b> $500 + 8 = \underline{\hspace{2cm}}$	<b>c</b> $600 + 20 = \underline{\hspace{2cm}}$
<b>d</b> $500 + 80 + 7 = \underline{\hspace{2cm}}$	<b>e</b> $900 + 10 + 4 = \underline{\hspace{2cm}}$

2 Complete each equation by writing the number in expanded form.

<b>example</b> $659 = \underline{600 + 50 + 9}$	<b>a</b> $437 = \underline{\hspace{2cm}}$
<b>b</b> $\underline{\hspace{2cm}} = 508$	<b>c</b> $549 = \underline{\hspace{2cm}}$
<b>d</b> $692 = \underline{\hspace{2cm}}$	<b>e</b> $\underline{\hspace{2cm}} = 749$

3 Write each set of numbers in order from least to greatest.

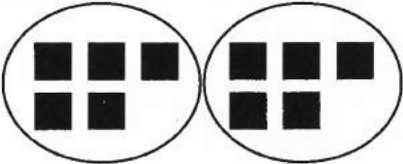
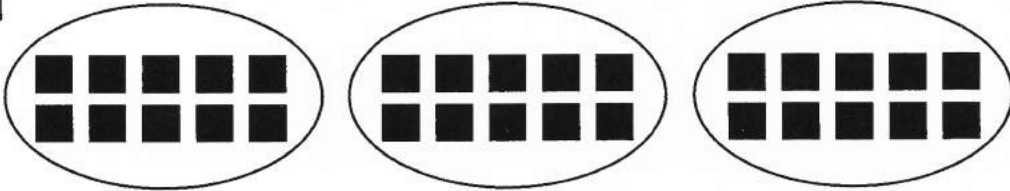

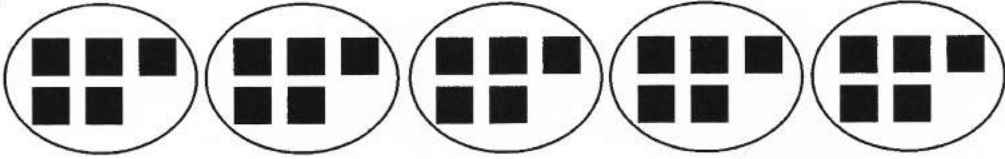

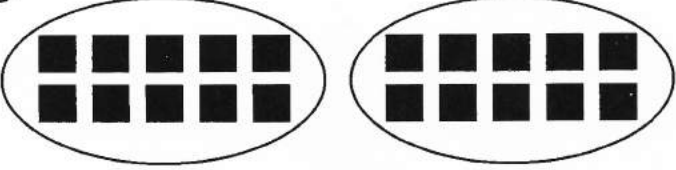
<b>example</b> 207, 720, 270, 702	$\underline{207}$ least	$\underline{270}$	$\underline{702}$	$\underline{720}$ greatest
<b>a</b> 437, 347, 734, 473	$\underline{\hspace{1cm}}$ least	$\underline{\hspace{1cm}}$	$\underline{\hspace{1cm}}$	$\underline{\hspace{1cm}}$ greatest
<b>b</b> 603, 630, 360, 316	$\underline{\hspace{1cm}}$ least	$\underline{\hspace{1cm}}$	$\underline{\hspace{1cm}}$	$\underline{\hspace{1cm}}$ greatest
<b>c</b> 191, 119, 190, 109	$\underline{\hspace{1cm}}$ least	$\underline{\hspace{1cm}}$	$\underline{\hspace{1cm}}$	$\underline{\hspace{1cm}}$ greatest
 <b>d</b> 6,071; 6,107; 6,017; 6,701	$\underline{\hspace{1cm}}$ least	$\underline{\hspace{1cm}}$	$\underline{\hspace{1cm}}$	$\underline{\hspace{1cm}}$ greatest

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# Loops & Groups

Write a multiplication equation to show how you can find the total number of squares. The loops in each problem contain the same number of squares.

Loops	Equation
<p><b>example</b></p> 	$2 \times 5 = 10$
<p><b>1</b></p> 	
<p><b>2</b></p> 	
<p><b>3</b></p> 	
<p><b>4</b></p> 	
<p><b>5</b></p> 	

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## Alfonso's Money Problem

Alfonso had \$23. He spent \$8 at the store during the day. That night, his dad gave him \$5 for his allowance. How much money did Alfonso have at the end of the day?

**1** What is this problem asking you to figure out?

**2** Underline any information in the problem that will help you find the answer.

**3a** Use this space to solve the problem. Show all your work using numbers, words, and/or labeled sketches. Write the answer on the line below when you're finished.

**b** Answer \_\_\_\_\_



### CHALLENGE

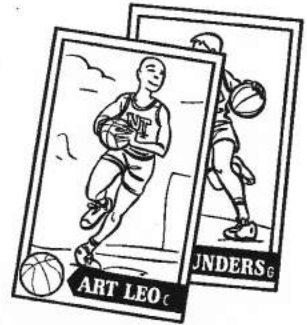
**4** Alfonso wants to share his money with his little sister. He wants to give her enough so that they each have exactly the same amount of money. His sister has \$9. How much money should Alfonso give her, and how much money will they each have? Show your work.

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## Ling's Basketball Cards

Ling had 34 basketball cards. She gave away 18 cards. Then she bought a pack of 6 new cards and her friend gave her 2 more. How many cards does she have now?

- 1 What is this problem asking you to figure out?
  
- 2 Underline any information in the problem that will help you find the answer.
- 3a Use this space to solve the problem. Show all your work using numbers, words, and/or labeled sketches. Write the answer on the line below when you're finished.



b Answer \_\_\_\_\_



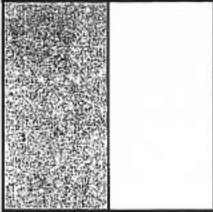
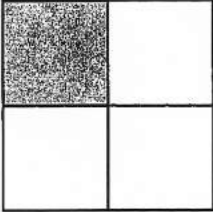
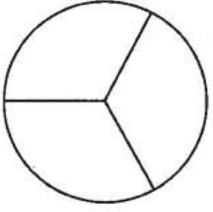
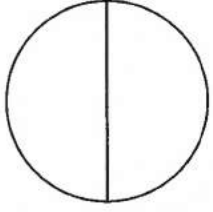
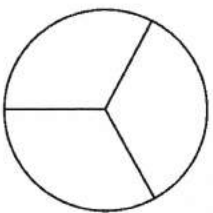
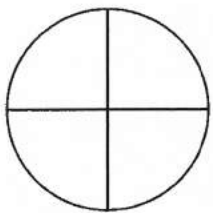
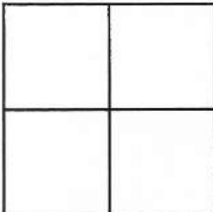
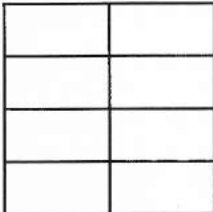
### CHALLENGE

- 4 Ling put her basketball cards in an album. She put 4 cards on each page. How many pages did she fill with her cards? Show all your work.

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# Comparing Fractions

Fill in the shapes to show the two fractions. Then compare them using  $<$  or  $>$ .

Show these fractions.	* Compare the fractions with $<$ or $>$ .
<p><b>example</b></p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p><math>\frac{1}{2}</math></p> </div> <div style="text-align: center;">  <p><math>\frac{1}{4}</math></p> </div> </div>	$\frac{1}{2} > \frac{1}{4}$
<p><b>1</b></p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p><math>\frac{1}{3}</math></p> </div> <div style="text-align: center;">  <p><math>\frac{1}{2}</math></p> </div> </div>	$\frac{1}{3}$ $\frac{1}{2}$
<p><b>2</b></p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p><math>\frac{2}{3}</math></p> </div> <div style="text-align: center;">  <p><math>\frac{2}{4}</math></p> </div> </div>	$\frac{2}{3}$ $\frac{2}{4}$
<p><b>3</b></p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p><math>\frac{3}{4}</math></p> </div> <div style="text-align: center;">  <p><math>\frac{5}{8}</math></p> </div> </div>	$\frac{3}{4}$ $\frac{5}{8}$

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## Patterns & Sums

1 Fill in the missing numbers in each skip-counting pattern.

**a** 7, 17, 27, \_\_\_\_\_, \_\_\_\_\_, 57, \_\_\_\_\_, \_\_\_\_\_, 87, 97, \_\_\_\_\_

**b** 8, 28, 48, \_\_\_\_\_, \_\_\_\_\_, 108, \_\_\_\_\_, \_\_\_\_\_, 168, 188, \_\_\_\_\_

**c** 4, 34, 64, \_\_\_\_\_, 124, 154, \_\_\_\_\_, \_\_\_\_\_, 244, 274, \_\_\_\_\_

2 Find each sum.

$$\begin{array}{r} 67 \\ + 20 \\ \hline \end{array}$$

$$\begin{array}{r} 38 \\ + 10 \\ \hline \end{array}$$

$$\begin{array}{r} 53 \\ + 30 \\ \hline \end{array}$$



$$\begin{array}{r} 76 \\ + 30 \\ \hline \end{array}$$

$$\begin{array}{r} 49 \\ + 20 \\ \hline \end{array}$$

$$\begin{array}{r} 63 \\ + 10 \\ \hline \end{array}$$

$$\begin{array}{r} 58 \\ + 20 \\ \hline \end{array}$$

3 Find each sum. Show all your work. Use the answers above to help you.

<p><b>a</b></p> $\begin{array}{r} 67 \\ + 20 \\ \hline \end{array}$	<p><b>b</b></p> $\begin{array}{r} 38 \\ + 16 \\ \hline \end{array}$
<p><b>c</b> <math>53 + 38 =</math></p>	<p><b>d</b> <math>76 + 35 =</math></p>
<p> <b>e</b></p> $\begin{array}{r} 257 \\ + 60 \\ \hline \end{array}$	<p> <b>f</b></p> $\begin{array}{r} 668 \\ + 70 \\ \hline \end{array}$



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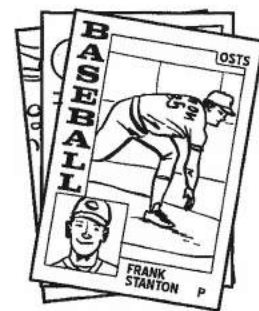
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# Double-Digit Addition

1 Add each pair of numbers. Show all your work.

<b>a</b> $30 + 65 =$    	<b>b</b> $42 + 35 =$    	<b>c</b> $46 + 38 =$    
<b>d</b> $\begin{array}{r} 53 \\ + 82 \\ \hline \end{array}$	<b>e</b> $\begin{array}{r} 67 \\ + 85 \\ \hline \end{array}$	<b>f</b> $\begin{array}{r} 94 \\ + 76 \\ \hline \end{array}$

2 Victor had 126 baseball cards. His cousin gave him 20 more cards. Then his brother gave him 58 more cards. How many baseball cards does Victor have now? Show all your work.



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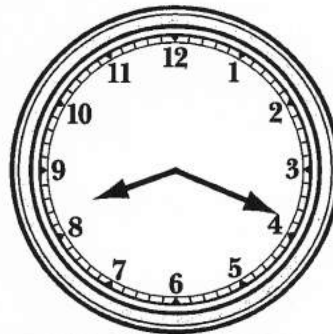
# Telling Time to the Minute

1 Fill in the circle next to the time shown on each clock.

a  1:45  1:47  2:47  9:09



b  3:40  8:04  8:19  8:20

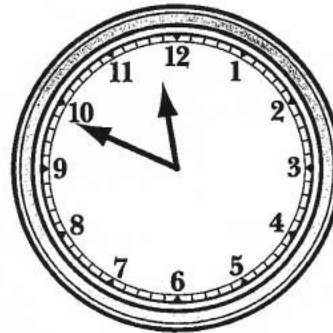


2 Write the time shown on each clock.

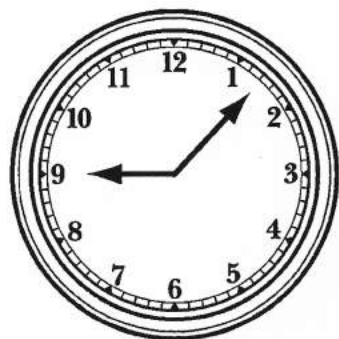
a \_\_\_\_\_ : \_\_\_\_\_



b \_\_\_\_\_ : \_\_\_\_\_



3 Circle the digital clock that shows the same time as this analog clock.



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# Number Patterns

**1** Fill in the missing numbers in each skip-counting pattern.

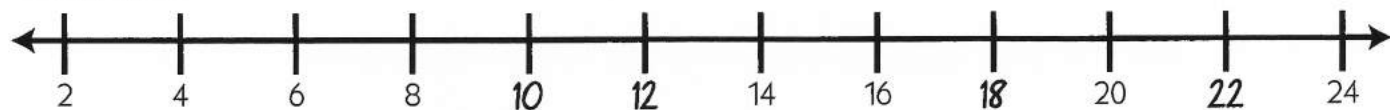
**a** 15, 30, 45, \_\_\_\_\_, \_\_\_\_\_, 90, 105, \_\_\_\_\_

**b** 25, 50, 75, \_\_\_\_\_, \_\_\_\_\_, 150, 175, \_\_\_\_\_

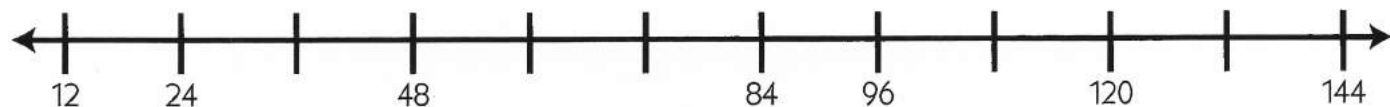
**c** 12, 42, \_\_\_\_\_, 102, \_\_\_\_\_, \_\_\_\_\_, 192

**2** Fill in the missing numbers in each counting pattern on the number lines.

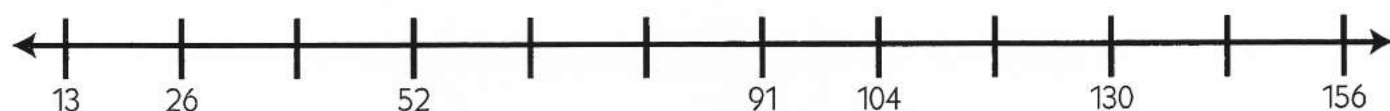
**example**



**a**



**b**



## CHALLENGE

**3** What are the first two numbers that the number lines in 2a and 2b will have in common? Explain your answer.

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## Double-Digit Subtraction

1 Solve the subtraction problems. Show all your work.

<b>a</b> $67 - 28$	<b>b</b> $83 - 37$	<b>c</b> $92 - 54$
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2 Mr. Jones needs 126 pieces of construction paper to do an art project with his students. All he has is a full pack with 50 sheets of paper and an open pack with some more sheets. How many more pieces of paper does he need to borrow from the teacher next door?

**a** Choose the information that will help you solve the problem.

- There are 24 students in the class.
- The open pack has 17 sheets of paper.
- Packs of construction paper cost \$3 each.
- He has 32 pencils.

**b** Solve the problem. Show all your work. Write your answer on the line at the bottom of the page.

Mr. Jones needs to borrow \_\_\_\_\_ more sheets of paper.



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## Subtraction Problems

1 Solve the subtraction problem. Show all your work.

<b>a</b> $238 - 157$	<b>b</b> Use addition to double check your answer.
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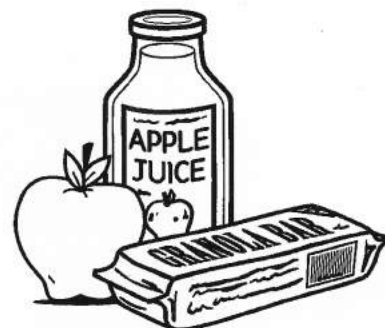
2 Cliff had \$5 to spend at the store. He got an apple for 55¢, a bottle of juice for \$1, and a snack bar. How much change did he get back?

**a** Choose the information that will help you solve the problem.

- The snack bar cost 89¢.
- The cashier didn't have any dimes.
- The juice was in a 16-ounce bottle.
- Ice cream bars cost 99¢.

**b** Solve the problem. Show all your work. Write your answer on the line at the bottom of the page.

Cliff got \_\_\_\_\_ back in change.

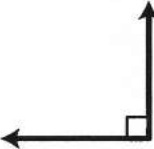
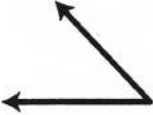



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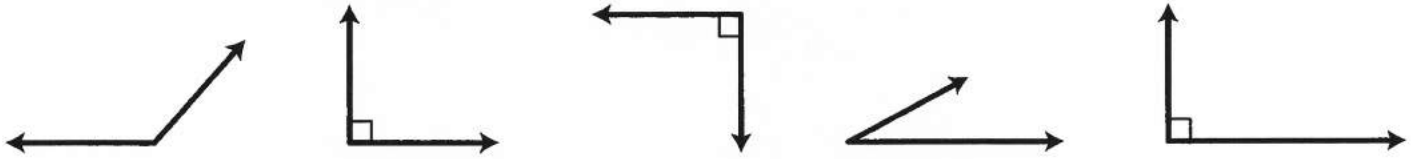
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# Right, Acute & Obtuse Angles

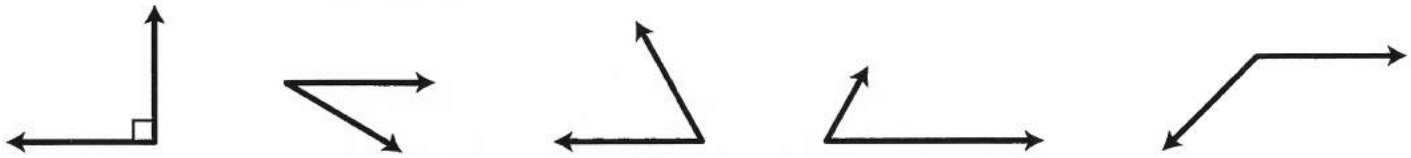
1 Use the information below to help solve the following problems.

<p>A right angle is exactly 90 degrees.</p> 	<p>An acute angle is less than 90 degrees.</p> 	<p>An obtuse angle is more than 90 degrees.</p> 
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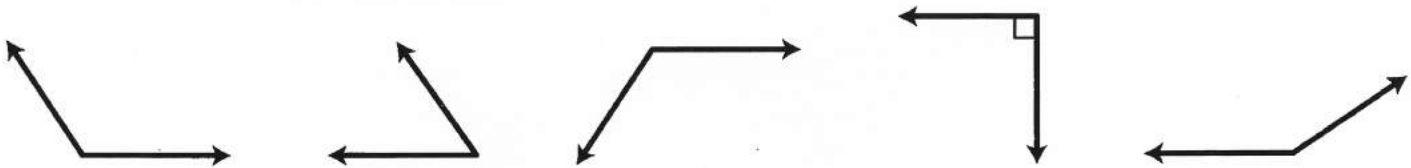
a Circle all the right angles.





b Circle all the acute angles.



c Circle all the obtuse angles.



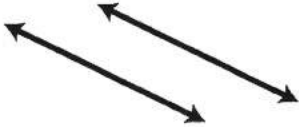

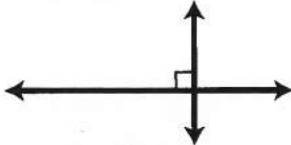
<p>2 Draw another ray to make an acute angle.</p> 	<p>3 Draw another ray to make an obtuse angle.</p> 
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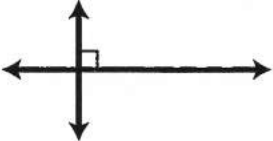

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## Parallel, Intersecting & Perpendicular Lines

Use the following information to help solve the problems below.

<p>Parallel lines are always the same distance apart. They will never cross.</p> 	<p>Intersecting lines cross each other.</p> 	<p>Perpendicular lines are special intersecting lines. Where they cross, they form a right angle.</p> 
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1 Fill in the bubble(s) next to the word(s) that best describe(s) each pair of lines.

<p><b>a</b> </p>	<p><input type="radio"/> parallel   <input type="radio"/> intersecting   <input type="radio"/> perpendicular</p>
<p><b>b</b> </p>	<p><input type="radio"/> parallel   <input type="radio"/> intersecting   <input type="radio"/> perpendicular</p>
<p><b>c</b> </p>	<p><input type="radio"/> parallel   <input type="radio"/> intersecting   <input type="radio"/> perpendicular</p>
<p><b>d</b> </p>	<p><input type="radio"/> parallel   <input type="radio"/> intersecting   <input type="radio"/> perpendicular</p>

2 Draw a pair of intersecting lines.

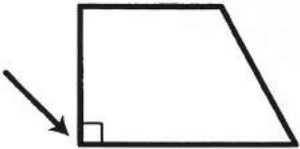
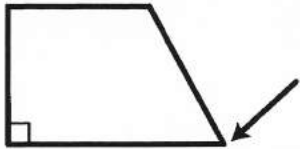
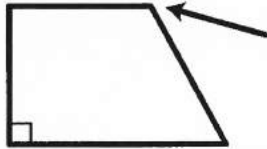
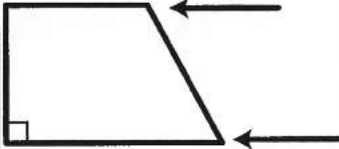
3 Draw three lines that are all parallel.

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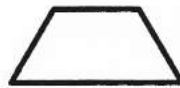
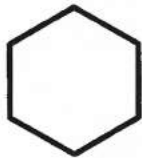
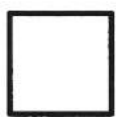
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# Angles & Sides

Use the following information to help solve the problems below.

<p>Right Angle exactly <math>90^\circ</math> a square corner</p> 	<p>Acute Angle smaller than a right angle</p> 	<p>Obtuse Angle larger than a right angle</p> 	<p>Parallel Sides would never cross if they went on forever</p> 
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1 Circle the shape with *exactly* 1 pair of parallel sides.



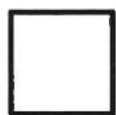
2 Circle the shape that has *only* acute angles.



3 Circle the shape that has *only* obtuse angles.



4 Circle the two shapes that have *only* right angles.





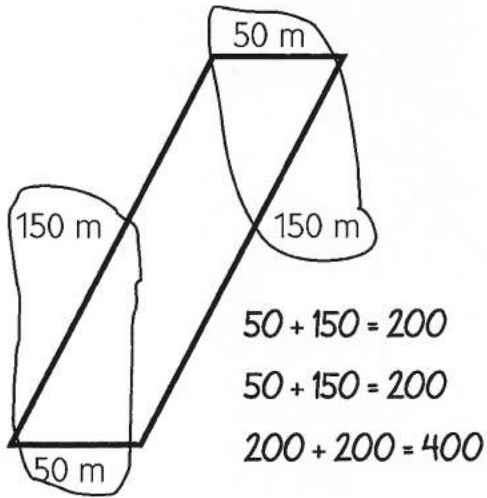
NAME \_\_\_\_\_

DATE \_\_\_\_\_

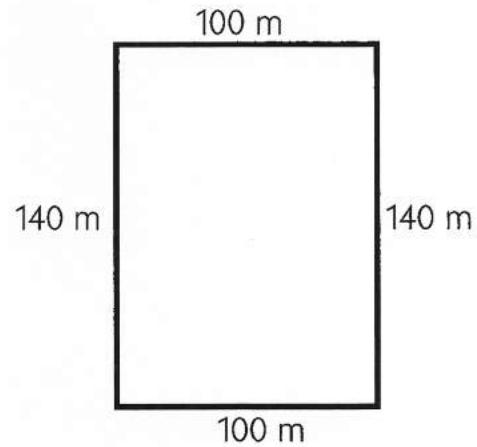
## More Perimeter Practice

1 Find the perimeter of each shape below. Think carefully about how it will be easiest for you to add the numbers. Show your work.

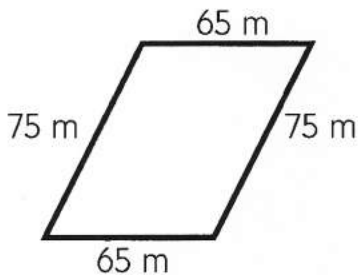
**example** Perimeter = 400 m



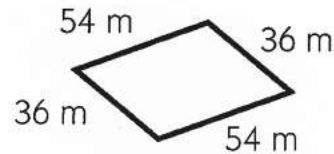
**a** Perimeter = \_\_\_\_\_



**b** Perimeter = \_\_\_\_\_



**c** Perimeter = \_\_\_\_\_



### CHALLENGE

2 On another piece of paper, draw and label two different 4-sided shapes that each have a perimeter of exactly 20 centimeters.

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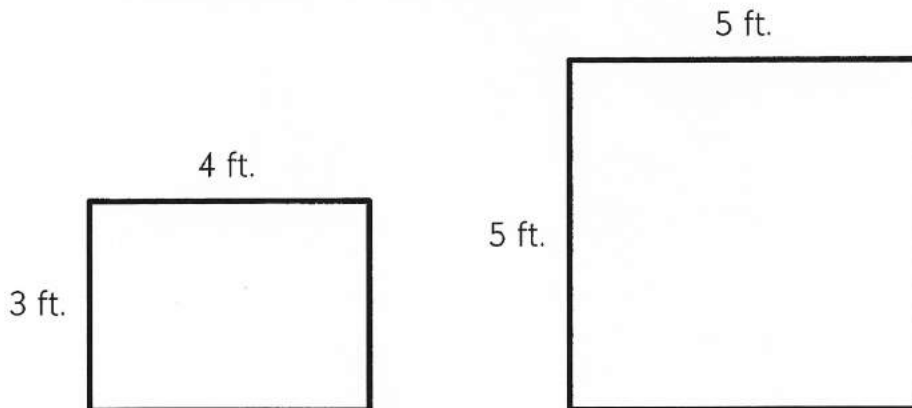
## Sandbox & Garden Problems

**1a** Mrs. Smith made a sandbox for her kindergarten students. It was 60 inches wide and 125 inches long. Make a labeled sketch of the sandbox below.

**b** What was the perimeter of the sandbox? Use your sketch to help solve the problem.

The perimeter of the sandbox was \_\_\_\_\_ inches.

**2** Mai and her sister Keiko were planting a garden. They made two beds to plant flowers. One was 4 feet by 3 feet. The other was 5 feet by 5 feet. They want to outline the beds with bricks that are each 1 foot long. How many bricks will they need to outline both beds? Show all of your work.



They will need \_\_\_\_\_ bricks to outline both beds.

NAME \_\_\_\_\_

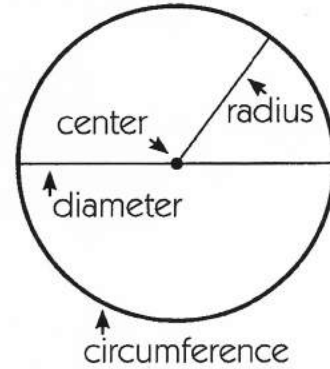
DATE \_\_\_\_\_

# All About Circles

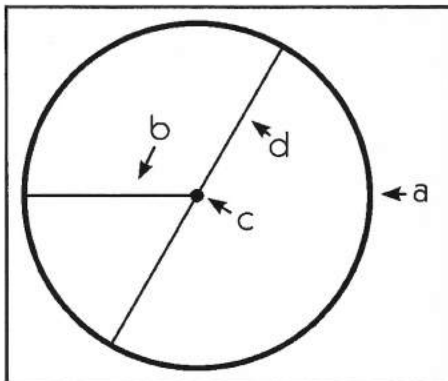
Use the following information to help solve the problems below.

A circle has different parts.

- The *center* is the point right in the middle.
- The *circumference* is the outline of the circle.
- The *radius* is a line segment that goes from the center to the circumference.
- The *diameter* is a line segment that goes between two points on the circumference and passes through the center.



**1** The parts of this circle are labeled with letters. Fill in the bubbles to show the correct name of each part.



**a**  center  circumference  radius  diameter

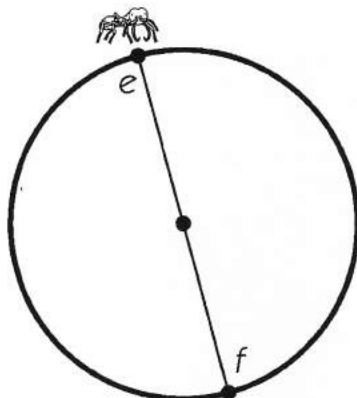
**b**  center  circumference  radius  diameter

**c**  center  circumference  radius  diameter

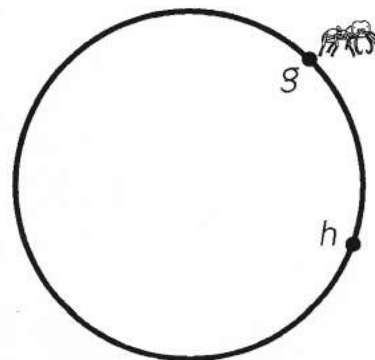
**d**  center  circumference  radius  diameter

**2** This ant wants to get from point *e* to point *f*. She can walk along the diameter of the circle or along the circumference. Which way should she go if she wants to walk the shortest distance?

circumference  diameter



**3** This ant wants to get from point *g* to point *h*. Draw the path he should take in order to walk the shortest distance.



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## More Subtraction Problems

1 Solve the subtraction problems. Show all your work.

<b>a</b> $\begin{array}{r} 164 \\ - 43 \\ \hline \end{array}$	<b>b</b> $\begin{array}{r} 236 \\ - 29 \\ \hline \end{array}$	<b>c</b> $\begin{array}{r} 103 \\ - 58 \\ \hline \end{array}$
<b>d</b> $\begin{array}{r} 357 \\ - 124 \\ \hline \end{array}$	<b>e</b> $\begin{array}{r} 335 \\ - 99 \\ \hline \end{array}$	<b>f</b> $\begin{array}{r} 387 \\ - 149 \\ \hline \end{array}$

2 There are two third grade classes at our school. There are 28 students in one class and 25 students in the other. There are also two fourth grade classes at our school. There are 27 students in one class and 23 students in the other. Which grade has more students? Exactly how many more students does that grade have? Show all your work.

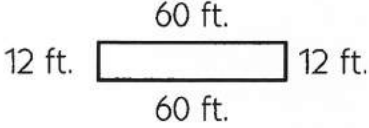
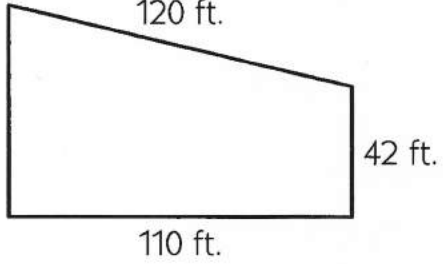
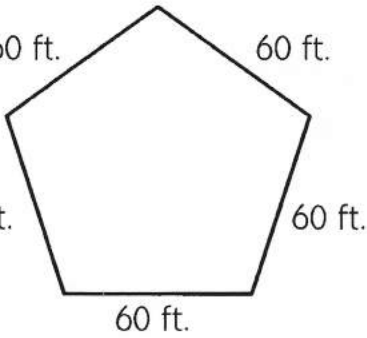


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## Perimeters of Different Shapes

**1** Find the perimeter of each shape. Think carefully about how to add the numbers. Some numbers are easier to add together. Show all your work. Circle your answers.

<p><b>example</b></p> 	$60 + 60 = 120 \text{ ft.}$ $12 + 12 = 24 \text{ ft.}$ $\begin{array}{r} 120 \text{ ft.} \\ + 24 \text{ ft.} \\ \hline 144 \text{ ft.} \end{array}$
<p><b>a</b></p> 	
<p><b>b</b></p> 	



### CHALLENGE

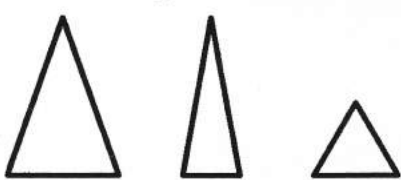
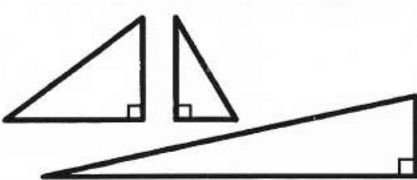
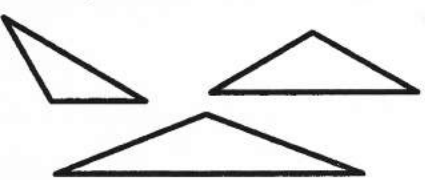
**2** Sketch and label a shape with 5 sides that has a perimeter of 120 feet.

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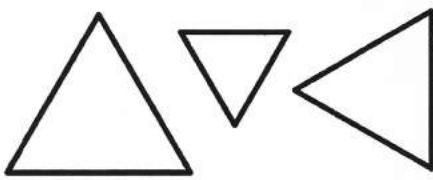
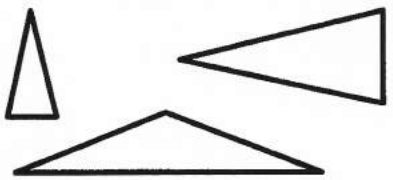
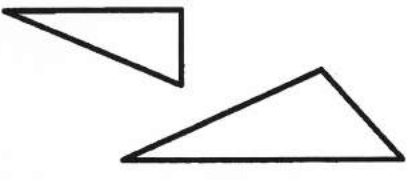
# Different Types of Triangles

Use the following information to help solve the problems below.







- You can group triangles by the size of their angles.

<p>Acute Triangles all 3 angles are acute</p> 	<p>Right Triangles 1 angle is a right angle</p> 	<p>Obtuse Triangles 1 angle is an obtuse angle</p> 
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- You can also group triangles by the lengths of their sides.

<p>Equilateral Triangles all 3 sides are the same length</p> 	<p>Isosceles Triangles 2 sides are the same length</p> 	<p>Scalene Triangles no sides are the same length</p> 
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1 Fill in the bubble to show what kind of triangle each one is.

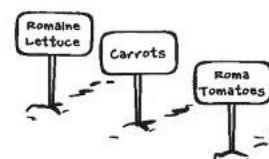
<p><b>a</b></p> <p><input type="radio"/> acute <input type="radio"/> right <input type="radio"/> obtuse</p> 	<p><b>b</b></p> <p><input type="radio"/> acute <input type="radio"/> right <input type="radio"/> obtuse</p> 	<p><b>c</b></p> <p><input type="radio"/> acute <input type="radio"/> right <input type="radio"/> obtuse</p> 
<p><b>d</b></p> <p><input type="radio"/> equilateral <input type="radio"/> isosceles <input type="radio"/> scalene</p> 	<p><b>e</b></p> <p><input type="radio"/> equilateral <input type="radio"/> isosceles <input type="radio"/> scalene</p> 	<p><b>f</b></p> <p><input type="radio"/> equilateral <input type="radio"/> isosceles <input type="radio"/> scalene</p> 

NAME \_\_\_\_\_ DATE \_\_\_\_\_

## Garden Patch Problems

**1** Liam wanted to put a fence around his vegetable garden patch. His brother asked him to put a fence around his garden patch too. Liam's garden patch was 5 feet wide and 10 feet long. His brother's patch was 6 feet wide and 7 feet long. How many feet of fencing will Liam need? Show all your work.

**2** Liam bought too much fencing and had 26 feet of it left over. He and his brother decided to make a rectangle-shaped garden patch for their little sister. They wanted to use all the extra fencing to outline her garden patch. What could be the dimensions of the patch they make for their sister? (Use only whole numbers of feet.) Show all your work.



### CHALLENGE

**3** Draw and label two other ways Liam and his brother could use all 26 feet of fencing for their sister's garden.