Multistep Number Stories

Home Link 8-1

NAME DATE TIME

SRB 26, 111-114

The fourth-grade students in Mr. Kennedy's class are investigating energy and motion. Students worked in teams to build two machines: a car that is propelled by a mousetrap and a boat that is propelled by balloons. Today the teams are competing to see which cars and boats go farthest.

Each car or boat gets 3 trials. The total distance from all 3 trials is used to determine which car or boat went farthest. Solve the number stories to help Mr. Kennedy's class compare the machines made by various teams.

(1) Team A's car went 173 cm on the first trial, 206 cm on the second trial, and 245 cm on the third trial. Team B's car went 217 cm on each of the three trials.

Which car went the farthest overall? _____

How much farther did it go? _____

(2) Team A's boat went 130 cm in all. Team B's boat went the same distance on all 3 trials and lost to Team A's boat by 7 cm.

How far did Team B's boat go on each trial? _____

(3) Team D's car went the same distance on each of its trials. Team C's car went exactly 1 cm farther in each trial than Team D's car. Team C's car went 543 cm in all.

How far did Team D's car go on each trial? _____

Practice

(4) $5{,}624 \div 8 =$ _____

(5) $8{,}500 \div 3 =$ _____

(6) $4\overline{)9{,}207}$

(7) $5\overline{)3{,}578}$

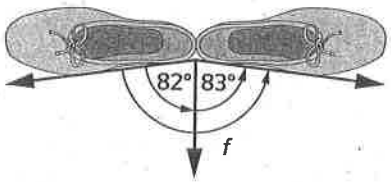
Finding Unknown Angle Measures

Home Link 8-2

NAME DATE TIME

Find the missing angle measures. For each problem, write an equation with a letter for the unknown to show how you found your answer.

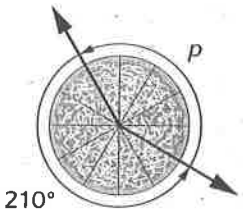
SRB 211-212

① 

°

f = _____

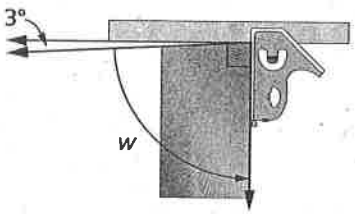
Equation: _____

② 

°

p = _____

Equation: _____

③ 

°

w = _____

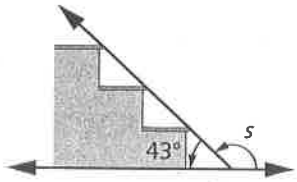
Equation: _____

④ 

°

l = _____

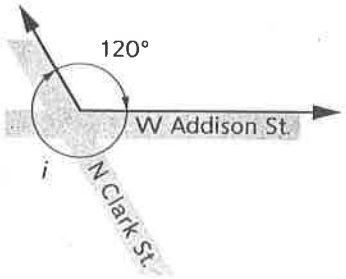
Equation: _____

⑤ 

°

s = _____

Equation: _____

⑥ 

°

i = _____

Equation: _____

Practice

⑦ $\frac{1}{3} + \frac{2}{3} + \frac{2}{3}$ = _____

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

⑨ $\frac{4}{5} + \frac{4}{5} + \frac{3}{5}$ = _____

⑩ $\frac{5}{12} + \frac{3}{12} + \frac{7}{12}$ = _____

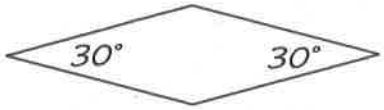
Finding Pattern-Block Measures

Home Link 8-3

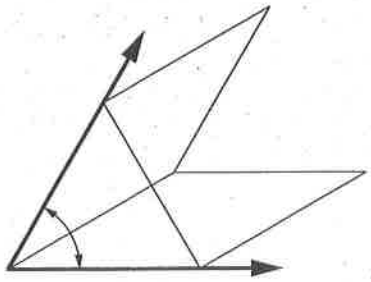
NAME DATE TIME

Molly is using pattern blocks to find angle measures of other pattern blocks. She knows that the measure of the small angle of a white rhombus is 30°.

SRB 211-212

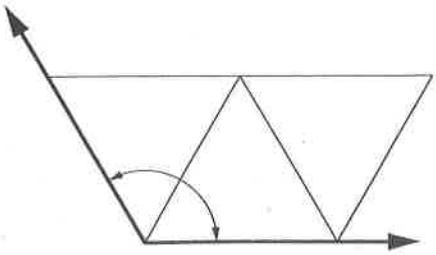


(1) Molly fills an angle of the green triangle with the small angles of white rhombuses. What is the measure of the triangle's angle? Explain how you know.



Angle measure: _____ °

(2) Molly fills a red trapezoid's large angle with angles of the green triangle. What is the measure of the red trapezoid's large angle? Explain how you know.



Angle measure: _____ °

Practice

(3) 5,588 * 3 = _____

(4) 9,037 * 5 = _____

(5) 52 * 94 = _____

(6) 83 * 77 = _____

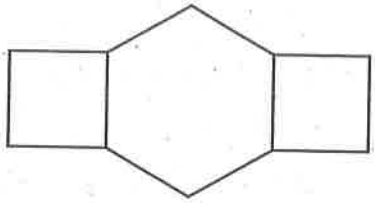
Line Symmetry

Home Link 8-4

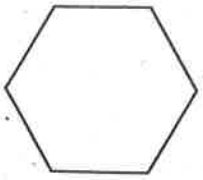
NAME DATE TIME

Use a straightedge to draw the lines of symmetry on each shape.

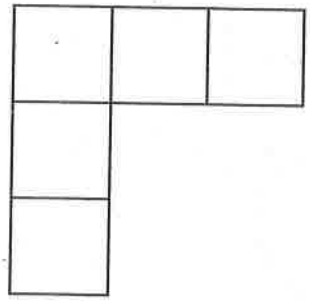
(1) Draw 2 lines of symmetry.



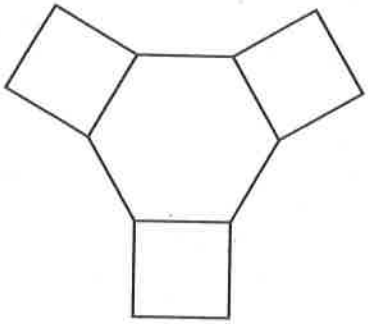
(2) Draw 6 lines of symmetry.



(3) Draw 1 line of symmetry.

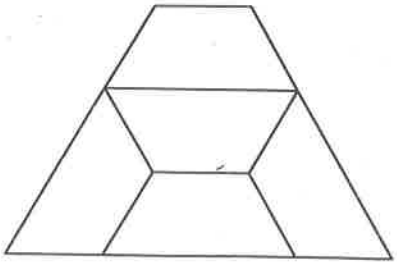


(4) Draw 3 lines of symmetry.



(5) How many lines of symmetry does this shape have? _____

Draw the line(s) of symmetry.



(6) Draw your own shape. Show the lines of symmetry. Be sure your shape includes at least 1 right angle.

Practice

(7) $6 * \frac{5}{6} =$ _____

(8) $3 * \frac{3}{8} =$ _____

(9) $4 * \frac{7}{10} =$ _____

(10) $6 * \frac{4}{12} =$ _____

Designing a Bookcase

Home Link 8-5

NAME DATE TIME

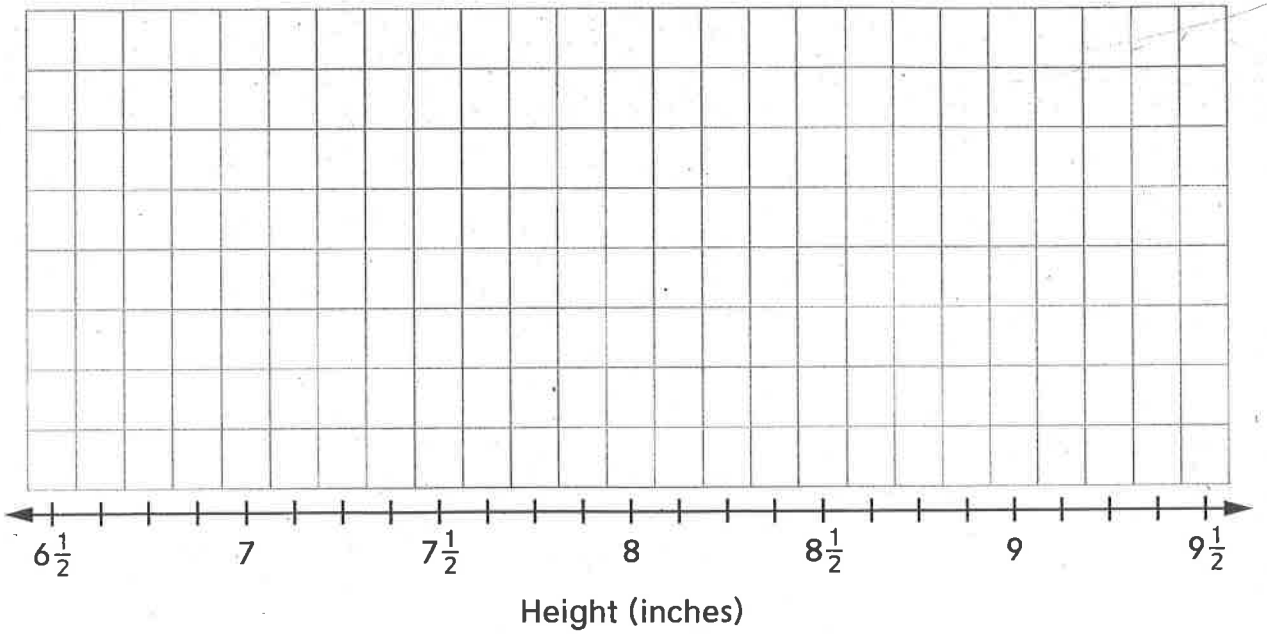
Nicholas is building a bookcase. To help with the design, he measured the height of each of his books to the nearest $\frac{1}{8}$ inch. His measurements are given below.

SRB 215-216

$6\frac{1}{2}$, $9\frac{1}{4}$, $7\frac{1}{8}$, $7\frac{1}{2}$, 8, $6\frac{7}{8}$, $9\frac{1}{4}$, $9\frac{1}{4}$, $9\frac{1}{4}$, $9\frac{1}{4}$, $9\frac{1}{4}$, $8\frac{1}{4}$, 8, $8\frac{1}{4}$, $8\frac{3}{8}$,
$6\frac{1}{2}$, $7\frac{1}{8}$, 9, $6\frac{7}{8}$, $9\frac{3}{8}$, $6\frac{7}{8}$, $7\frac{1}{2}$, 8, $8\frac{1}{4}$, $9\frac{1}{4}$, $6\frac{7}{8}$, $6\frac{7}{8}$, $8\frac{1}{4}$, $8\frac{1}{4}$, $8\frac{1}{4}$

Plot the data set on the line plot below.

Book Heights



Use the completed line plot to answer the questions below.

(1) What is the difference in height between the tallest and shortest books? _____ in.

(2) Nicholas wants the space between the shelves to be $\frac{7}{8}$ inch taller than his tallest book.

a. How far apart should he make the shelves? _____ in.

b. If the thickness of the wood he uses for the shelves is $\frac{5}{8}$ inch, what will be the total height of each shelf? (*Hint:* The total height is the thickness of one piece of wood plus the distance between shelves.) _____ in.

Practice

(3) 8,207 ÷ 7 → _____

(4) 7,109 ÷ 8 → _____

Perimeters and Missing Measures

Home Link 8-6

NAME DATE TIME

Use a formula to find the perimeter of each rectangle. Show your work in the space provided.

SRB 164, 175, 200

① Length = $3\frac{3}{6}$ yd

Width = $\frac{1}{6}$ yd

Perimeter: _____ yd

② Length = $5\frac{1}{12}$ ft

Width = $4\frac{11}{12}$ ft

Perimeter: _____ ft

For each rectangle, find the unknown side measure.

③ Perimeter: $\frac{74}{100}$ kilometer

Length = $\frac{25}{100}$ km

Width = _____ km

④ Perimeter: 10 inches

Length = $4\frac{3}{8}$ in.

Width = _____ in.

⑤ Perimeter: $12\frac{8}{10}$ centimeters

Length = $4\frac{1}{10}$ cm

Width = _____ cm

Try This

⑥ Perimeter: $16\frac{1}{2}$ ft

Length = _____ ft

Width = $3\frac{1}{2}$ ft

Practice

⑦ $2 * \frac{2}{3} =$ _____

⑧ $5 * \frac{3}{4} =$ _____

⑨ $9 * \frac{4}{5} =$ _____

⑩ $8 * \frac{6}{12} =$ _____