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NCTM Standards (Cont.)

NCTM Standards

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NCTM Standards (Cont.)

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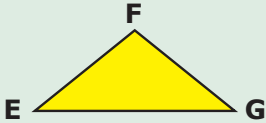
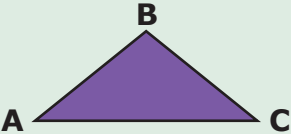
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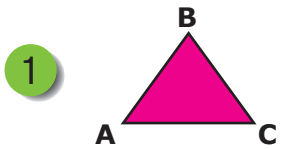
NCTM Standards

Skills	Number and Operations	Algebra	Geometry	Measurement	Data Analysis and Probability
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<p>point A</p>  <p>denoted → A</p>	<p>A point or location is denoted (labeled) by a capital letter.</p>
<p>line segment</p>  <p>denoted → \overline{CD}</p>	<p>A line segment connects two points.</p>
<p>polygon</p>  <p>denoted → triangle EFG or $\triangle EFG$</p>	<p>A polygon is a closed figure made from line segments.</p>
<p>vertices</p> 	<p>The points where the sides of a polygon meet are called the vertices. Polygons are named by their vertices. This triangle has vertices A, B, and C.</p>

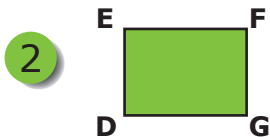
Name the sides and vertices.



sides: _____

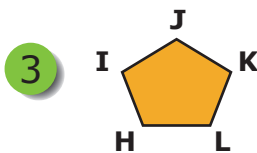
vertices: ___ _ _

4 Draw a triangle with sides **RS**, **TR**, and **ST**. Label all the vertices.



sides: _____

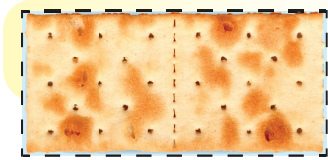
vertices: _____



sides: _____

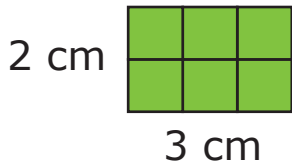
vertices: _____



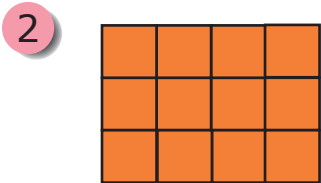


Perimeter is the distance around a polygon.

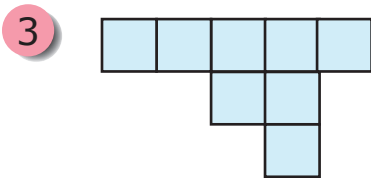
- 1 Find the perimeter of each figure below. Each small square is 1 cm on each side.



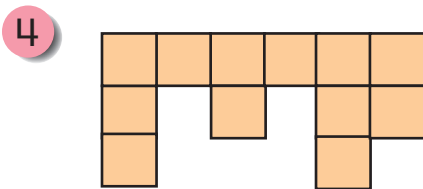
perimeter = $2 + 3 + 2 + 3 = 10$ cm



perimeter = _____

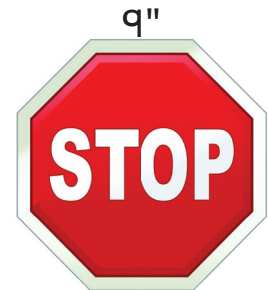


perimeter = _____

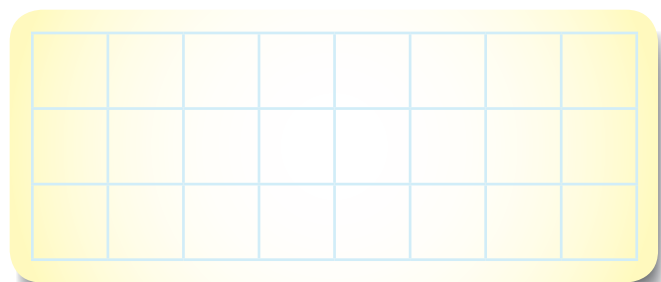
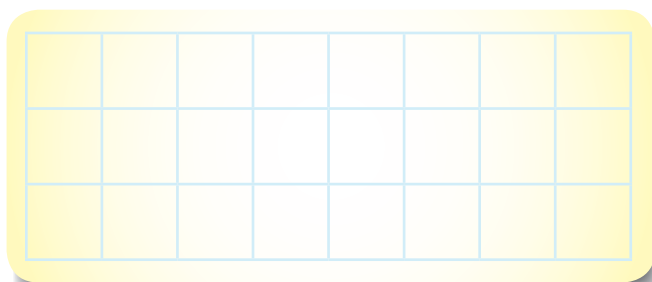


perimeter = _____

- 5 What is the perimeter of the stop sign if each side is 9 inches long? _____



- 6 Using 6 small squares measuring 1 cm on each side, make a figure with a perimeter of 14 cm. Using the six small squares, make a figure with a perimeter of 12 cm.



< is the symbol for **less than**
 > is the symbol for **greater than**

To compare fractions, start with like fractions (**same denominators**), then compare the numerators.

The illustration shows three children on the left. To their right are two orange boxes. The first box contains the fraction $\frac{2}{5} < \frac{3}{5}$. The second box contains the fraction $\frac{3}{4} > \frac{5}{8}$. Below the second box are two circles, each divided into 8 equal sectors. The first circle has 6 sectors shaded yellow, and the second circle has 5 sectors shaded yellow, with a greater-than sign (>) between them.

Place "<", ">", or "=" between the two amounts.

- | | | |
|------------------------------|-----------------------|----------------------------|
| 1 $\frac{7}{8}$ cup of sugar | <input type="radio"/> | $\frac{3}{8}$ cup of sugar |
| 2 $\frac{5}{6}$ inch | <input type="radio"/> | $\frac{3}{4}$ inch |
| 3 $\frac{2}{3}$ cup of milk | <input type="radio"/> | $\frac{5}{8}$ cup of milk |
| 4 $\frac{1}{4}$ hour | <input type="radio"/> | $\frac{1}{3}$ hour |
| 5 $\frac{5}{9}$ cm | <input type="radio"/> | $\frac{5}{6}$ cm |
| 6 $\frac{4}{11}$ probability | <input type="radio"/> | $\frac{1}{3}$ probability |



Bananas
\$.69 each



Tomatoes
\$1.25 each



Apples
\$.75 each



Carrots
\$.39 each



Red Peppers
\$1.17 each



Broccoli
\$2/bunch



Potatoes
\$.50 each



Onions
\$.29/bunch

1 What three items did Michael buy for \$2.44?

2 What three items did Ava buy for \$2.31?

3 What three items did Ethan buy for \$3.94?

4 What four items did Emily buy for \$1.93?

5 What four items did Leon buy for \$4.68?



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Operations that undo each other are called **inverse operations**.

If 3 is added to 7 and then 3 is subtracted from the answer, we return to 7.

If 30 is divided by 6 and then multiplied by 6, we return to 30.

$3 + 7 = 10$	Subtraction is the inverse (undoes) addition.	$30 \div 6 = 5$
$10 - 3 = 7$	Addition is the inverse (undoes) subtraction.	$5 \times 6 = 30$
	Multiplication is the inverse (undoes) division.	
	Division is the inverse (undoes) multiplication.	

Use inverse operations to solve for the unknown number **N**, then circle the two false answers on the right.

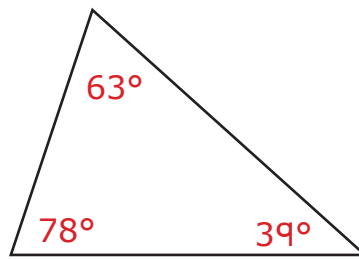
- 1 $N + 29 = 40$ $N = \underline{\quad}$
- 2 $N - 32 = 17$ $N = \underline{\quad}$
- 3 $N \times 3 = 30$ $N = \underline{\quad}$
- 4 $N \div 5 = 22$ $N = \underline{\quad}$
- 5 $N + 201 = 742$ $N = \underline{\quad}$
- 6 $N - 126 = 83$ $N = \underline{\quad}$
- 7 $N \times 6 = 78$ $N = \underline{\quad}$
- 8 $N \div 14 = 16$ $N = \underline{\quad}$
- 9 $N - 401 = 500$ $N = \underline{\quad}$
- 10 $N + 154 = 200$ $N = \underline{\quad}$

- 10
- 541
- 901
- 209
- 11
- 13
- 334
- 224
- 49
- 46
- 892
- 110

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The sum of the three angles in a triangle always adds to 180° .

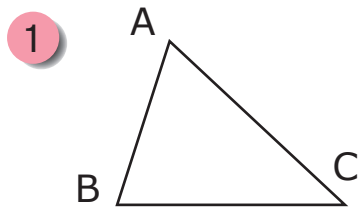
$$78^\circ + 63^\circ + 39^\circ = 180^\circ$$



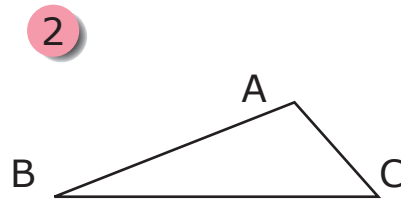
Polygon	Sum of the Angles
triangle	180°
quadrilateral	360°
pentagon	540°
hexagon	720°

adding a side adds 180° to the total

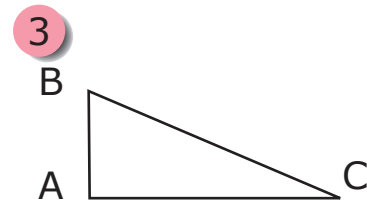
Find each missing angle using the given angles by adding the given angles and subtracting from the total for the polygon.



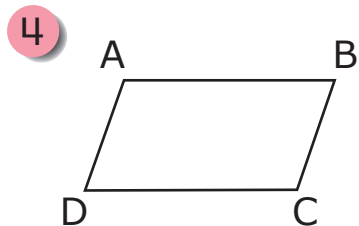
$$\begin{aligned} \angle A &= 70^\circ \\ \angle B &= 73^\circ \\ \angle C &= \underline{\hspace{1cm}} \end{aligned}$$



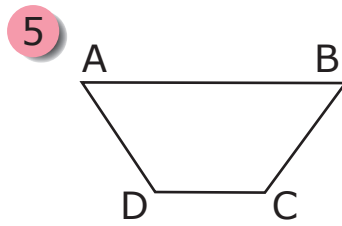
$$\begin{aligned} \angle A &= \underline{\hspace{1cm}} \\ \angle B &= 28^\circ \\ \angle C &= 46^\circ \end{aligned}$$



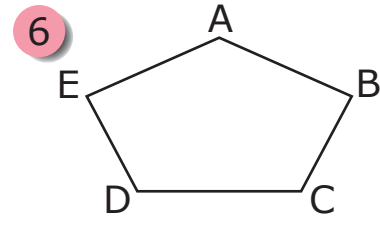
$$\begin{aligned} \angle A &= 90^\circ \\ \angle B &= 60^\circ \\ \angle C &= \underline{\hspace{1cm}} \end{aligned}$$



$$\begin{aligned} \angle A &= 115^\circ \\ \angle B &= \underline{\hspace{1cm}} \\ \angle C &= 115^\circ \\ \angle D &= 65^\circ \end{aligned}$$



$$\begin{aligned} \angle A &= 58^\circ \\ \angle B &= 58^\circ \\ \angle C &= \underline{\hspace{1cm}} \\ \angle D &= 122^\circ \end{aligned}$$



$$\begin{aligned} \angle A &= \underline{\hspace{1cm}} \\ \angle B &= 76^\circ \\ \angle C &= 118^\circ \\ \angle D &= 118^\circ \\ \angle E &= 76^\circ \end{aligned}$$