

STUDY LINK
9•1

Plotting Points



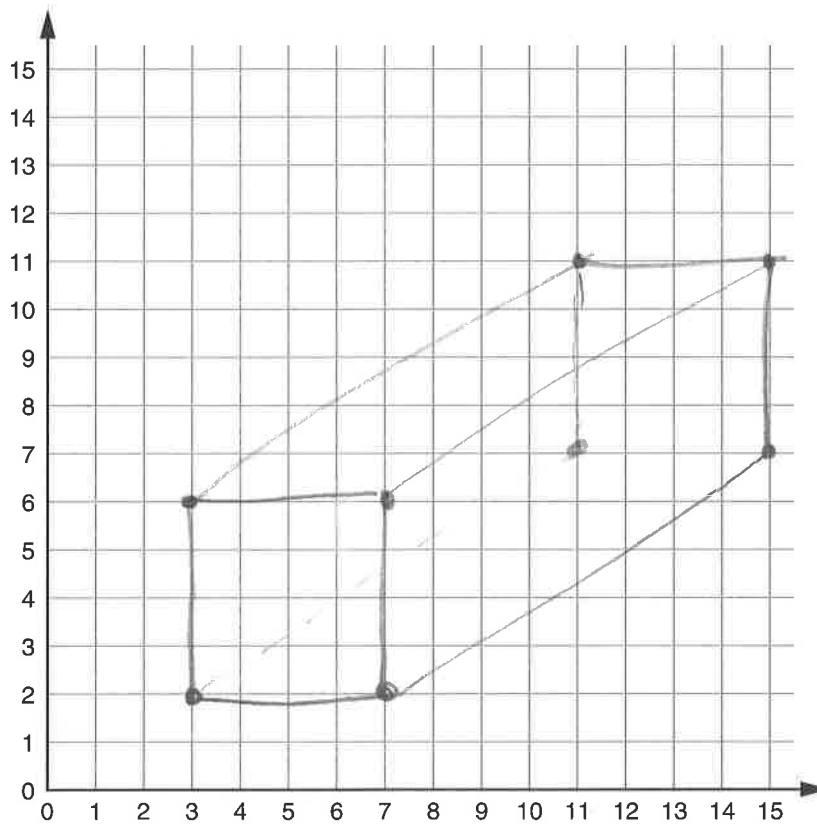
1. Plot the following points on the grid below. After you plot each point, draw a line segment to connect it to the last point you plotted.

Reminder: Use your straightedge!

(3,6); (11,11); (15,11); (15,7); (7,2); (3,2); (3,6); (7,6)

Draw a line segment connecting (7,6) and (7,2).

Draw a line segment connecting (7,6) and (15,11).



2. What 3-dimensional shape could this drawing represent?

Rectangular Prism

3. a. What ordered pair would name the missing vertex to represent a prism? (11,7)

b. Draw the missing vertex, and then add dashed lines for the missing edges.

Practice

4. $3,745 + 8,761 + 791 =$ _____

5. $3.745 + 87.61 + 781 =$ _____

6. $4\frac{3}{8} + 5\frac{7}{8} =$ _____

7. $\frac{1}{5} + \frac{3}{4} =$ _____

Practice

$$\begin{array}{r} \textcircled{4} \quad 3745 \\ \quad 8761 \\ + \quad 791 \\ \hline 13297 \end{array}$$

$$\begin{array}{r} \textcircled{5} \quad 3.745 \\ \quad .8761 \\ + \quad 781. \\ \hline 872.355 \end{array}$$

$$\textcircled{6} \quad 4\frac{3}{8} + 5\frac{7}{8} = 9\frac{\textcircled{10}}{8} = 9\frac{2}{8} = 9\frac{1}{4} = 9 + \frac{1}{4} = 10\frac{1}{4}$$

$$\begin{array}{r} \textcircled{7} \quad 1\frac{4}{5} \\ \quad 3\frac{15}{20} \\ + \quad 4\frac{15}{20} \\ \hline \quad 19 \\ \quad \underline{20} \end{array}$$

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Plotting Figures on a Coordinate Grid



1. Plot three points, and make a triangle on the grid below. Label the points as A , B , and C . List the coordinates of the points you've drawn.

Sample
answers

$A: (8, 16)$ $B: (0, 5)$ $C: (16, 5)$

2. Circle the name of the kind of triangle you drew.

scalene

equilateral

isosceles

3. Plot four points, and make a parallelogram on the grid below. Label the points as M , N , O , and P . List the coordinates of the points you've drawn.

$M: (5, 15)$ $N: (1, 12)$ $O: (3, 1)$ $P: (8, 4)$

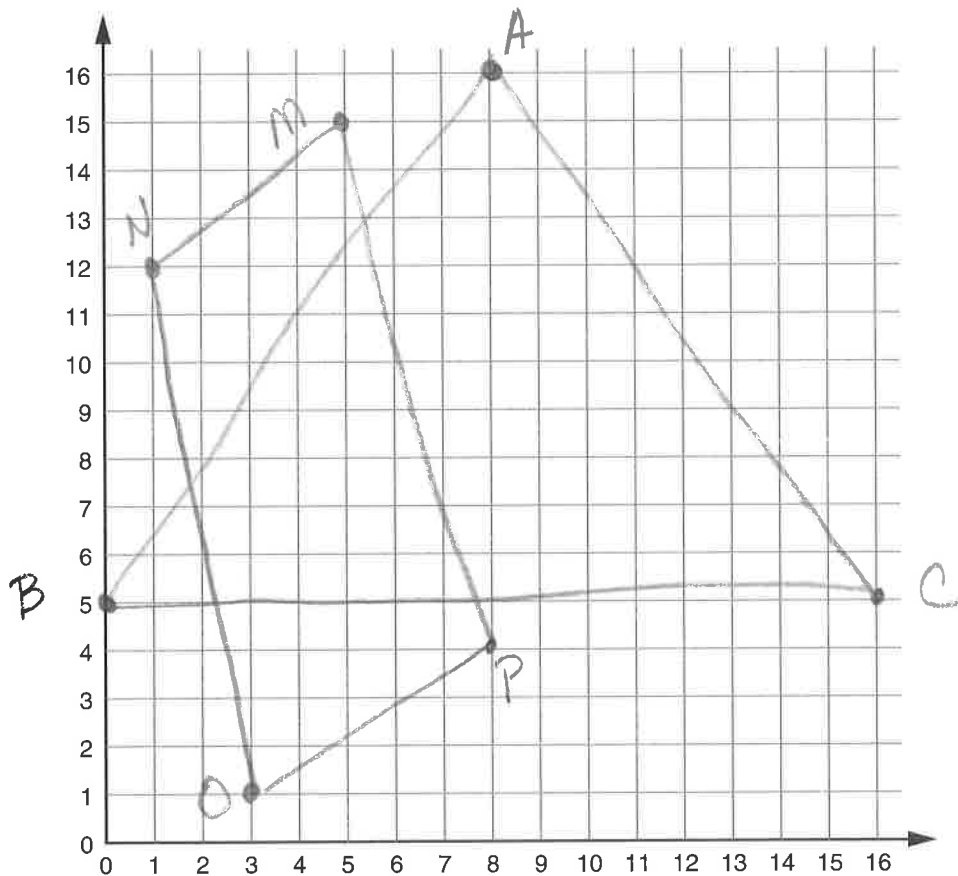
4. Circle another name for the parallelogram you've drawn.

quadrangle

rhombus

rectangle

square



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Reflections on a Coordinate Grid



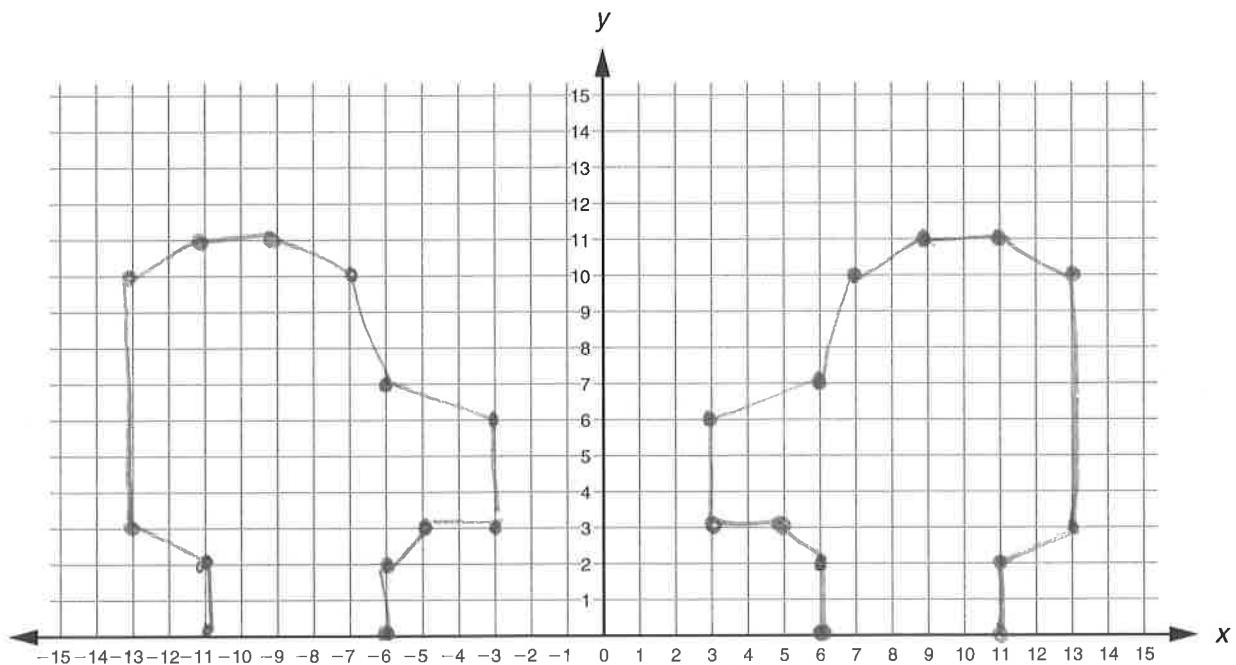
1. Plot the points listed below. Use a straightedge to connect the points in the same order that you plot them.

(6,0); (6,2); (5,3); (3,3); (3,6); (6,7); (7,10); (9,11); (11,11);
 (13,10); (13,3); (11,2); (11,0)

2. Which number (the first number or the second number) in the pair do you need to change to the opposite in order to draw the reflection of this design on the other side of the y -axis?

first number

3. Draw the reflection described above. Plot the points and connect them.



Practice

Multiply.

4. $752 * 35 =$ _____

5. $75.2 * 0.35 =$ _____

6. $\frac{7}{8} * \frac{2}{3} =$ _____

7. $2\frac{1}{2} * \frac{3}{4} =$ _____

Practice

④ 2752

$\times 35$ or

3760

$+ 22560$

26320

752

2	2	1	5	0	6	3
6	3	5	2	1	0	5
	3	2	0			

⑤ 75.2

0.35

3 Decimal places

3760

22560

26.320

75.2

2	2	1	5	0	6	3
6	3	5	2	1	0	5
	3	2	0			

⑥ $\frac{7}{8} \times \frac{2}{3} = \frac{14}{24} = \frac{7}{12}$

⑦ $2\frac{1}{2} = \frac{5}{2} \times \frac{3}{4} = \frac{15}{8} = 1\frac{7}{8}$

Study Link 9.4

① $3^2 5$

$\times 4$

150 square feet of fence

$$\begin{array}{r} 75 \\ 2 \overline{) 150} \\ \underline{-14} \downarrow \\ 10 \\ \underline{-10} \\ 0 \end{array}$$

$75 \times 10 \text{ minutes} = 750$

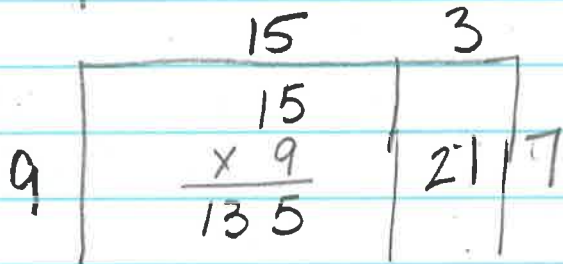
12 hours

$$\begin{array}{r} 60 \overline{) 750} \\ \underline{-60} \downarrow \\ 150 \\ \underline{-120} \\ 30 \end{array}$$

$\frac{30}{60} = \frac{1}{2}$ of another hour

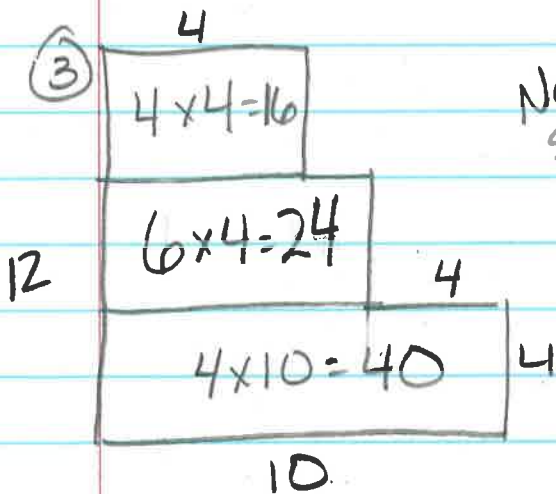
12 hrs. 30 minutes to paint the fence

②



$$\begin{array}{r} 135 \\ - 21 \\ \hline 114 \end{array} \text{ (the door)}$$

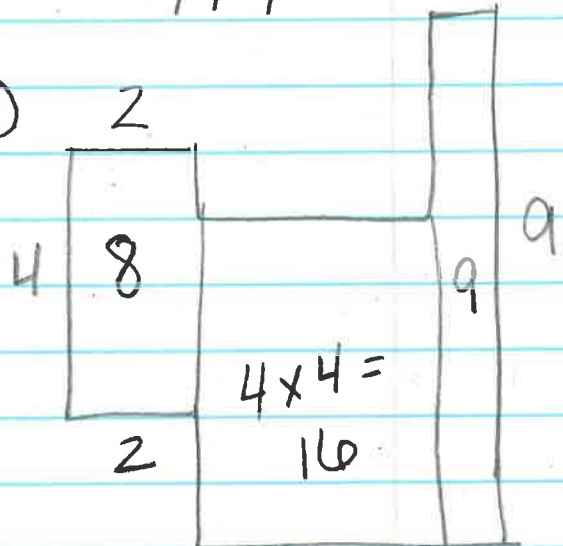
③



$16 + 24 + 40 = 80$

Not to scale

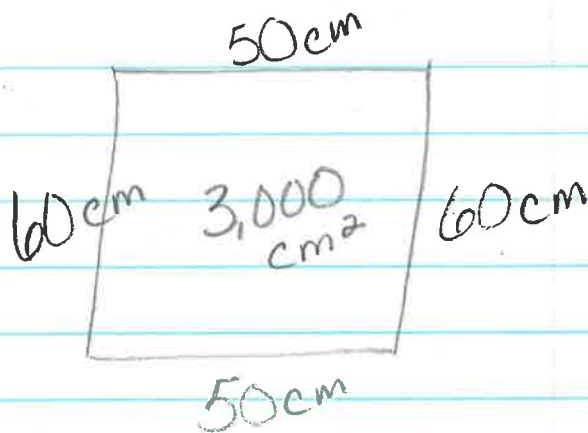
④



$16 + 17 = 33 \text{ ft}^2$

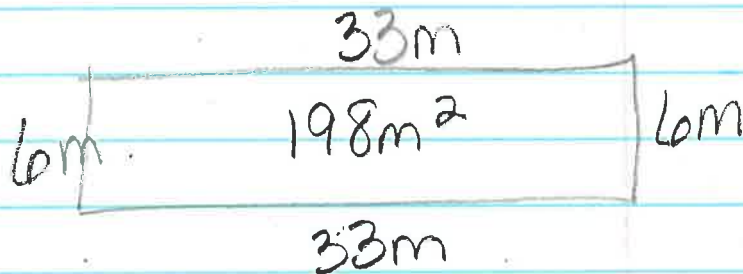
⑤

$$\begin{array}{r} 60 \\ 50 \overline{) 3,000} \\ \underline{- 300} \\ 0 \\ \underline{- 0} \\ 0 \end{array}$$



⑥

$$\begin{array}{r} 33 \\ 6 \overline{) 198} \\ \underline{- 18} \\ 18 \\ \underline{- 18} \\ 0 \end{array}$$



The Rectangle Method



Use the rectangle method to find the area of each figure below.



	<p>Example:</p> $5 * 3 = 15$ $\frac{1}{2} \text{ of } 15 = 7.5$ $\text{Area} = 7.5 \text{ cm}^2$	<p>1 cm²</p>
	<p>$2 \times 4 = 8$ $8 \div 2 = 4$</p> <p>$4 \times 3 = 12$ $12 \div 2 = 6$</p>	<p>3</p>
<p>1. Area = <u>4</u> cm²</p>	<p>2. Area = <u>6</u> cm²</p>	
	<p>$4 \times 4 = 16$</p>	
<p>3. Area = <u>10</u> cm²</p>		
<p>4. Area = <u>10</u> cm²</p>		
	<p>$5 \times 3 = 15$</p>	<p>2</p>
<p>5. Area = <u>15</u> cm²</p>	<p>$4 \times 2 = 8$ $8 \div 2 = 4$</p>	<p>4</p>
<p>6. Area = <u>4</u> cm²</p>		

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Area Formulas



For each figure below, label the base and the height, find the area, and record the number model you use to find the area.

Area of a parallelogram: $A = b * h$

Area of a triangle: $A = \frac{1}{2} * b * h$

<p>1. Area: $4\frac{1}{2} \text{ cm}^2$</p>	<p>2. Area: $7\frac{1}{2} \text{ cm}^2$</p>
<p>Number model: $3 \times 3 \div 2 = 4\frac{1}{2}$ (unit)</p>	<p>Number model: $5 \times 3 \div 2 = 7\frac{1}{2}$ (unit)</p>
<p>3. Area: 3 cm^2</p>	<p>4. Area: 24 cm^2</p>
<p>Number model: $3 \times 2 \div 2 = 3$ (unit)</p>	<p>Number model: $6 \times 4 = 24$ (unit)</p>
<p>5. Area: 12 cm^2</p>	<p>6. Area: 8 cm</p>
<p>Number model: $3 \times 4 = 12$ (unit)</p>	<p>Number model: $4 \times 2 = 8$ (unit)</p>

Study Link 9.7

① yd^2 ② cm^2 ③ cm^2 ④ in^2 ⑤ ft^2

⑥ $13 \times 20 = 260 \div 2 = 130 \text{ ft}^2$

⑦ $8 \times 2 = 16 \text{ cm}^2$

⑧ $22 \times 7 = 154 \div 2 = 77 \text{ yd}^2$

⑨ $8 \times 9.5 = 76.0 \text{ m}^2$

Study Link 9.8

① $3 \times 5 = 15$

② $2 \times 4 = 8$

$3 \times 5 \times 1 = 15$

$2 \times 4 \times 1 = 8$

$3 \times 5 \times 3 = 45$

$2 \times 4 \times 2 = 16$

③ 9 cubes on the bottom level / or you can count the tops on the top level
Volume would be the same for 1st layer
 $3 \text{ layers} \times 9 = 27$

④ 14 when counting top cubes
1st layer would also be 14
 $14 \times 4 = 56$

Practice

⑤ $\frac{3}{5} \times \frac{1}{8} = \frac{3}{40}$

⑥
$$\begin{array}{r} 960 \\ 4 \overline{) 3,840} \\ \underline{-360} \\ 24 \\ \underline{-24} \\ 00 \\ \underline{-00} \\ 0 \end{array}$$

$$\begin{array}{r} 960 \\ \times 4 \\ \hline 3840 \end{array}$$

$$\frac{4}{5} \times \frac{5}{6} = \frac{20}{30} = \frac{2}{3}$$

Study Link 9.9

$$\textcircled{1} 6 \times 4 \div 2 = 12 \times 6 = 72 \text{ cm}^3$$

it's a triangle
base

$$\textcircled{2} 5 \times 4 \times 7.2 = 7.2$$

$$\begin{array}{r} 00 \\ 00 \\ \hline 1440 \\ \hline 1440 \text{ cm}^3 \end{array}$$

$$\textcircled{3} 8 \times 5 \div 2 = 20$$

$$\begin{array}{r} 00 \\ 00 \\ \hline 100 \\ \hline 600 \\ \hline 700 \text{ in}^3 \end{array}$$

$$\textcircled{4} 3 \times 5 \times 6 = 90$$

$$4 \times 3 \times 6 = 72$$

$$\hline 162 \text{ cm}^3$$

$$\textcircled{5} \text{ Given base: } 15$$

$$\begin{array}{r} 00 \\ 00 \\ \hline 45 \\ \hline 45 \text{ in}^3 \end{array}$$

$$\textcircled{6} \text{ Given base: } 20$$

$$\begin{array}{r} 00 \\ 00 \\ \hline 140 \\ \hline 140 \text{ m}^3 \end{array}$$

Practice

$$\textcircled{7} \begin{array}{r} 4 \\ 36 \overline{) 144} \\ \underline{-144} \\ 0 \end{array}$$

$$\textcircled{8} \begin{array}{r} 711 \\ 38 \overline{) 2711} \\ \underline{-3577} \\ \hline 245 \end{array}$$

$$\textcircled{9} \begin{array}{r} 3577 \\ \underline{-3417} \\ 160 \end{array}$$

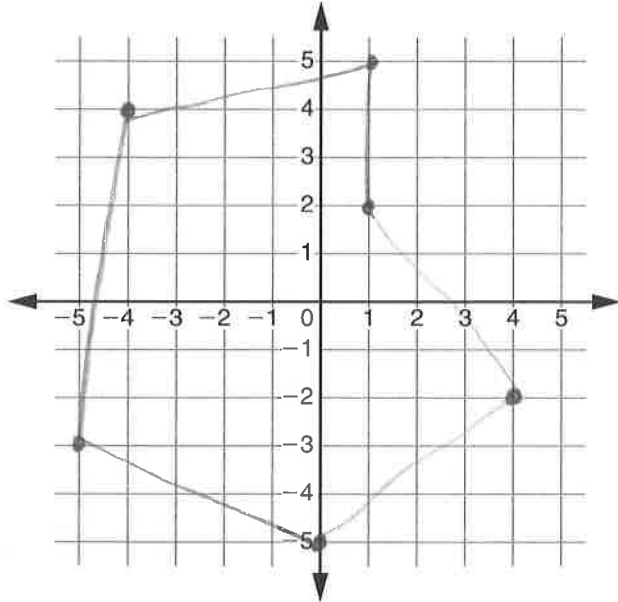
$$\textcircled{10} \begin{array}{r} 5 \\ 68 \overline{) 340} \\ \underline{-340} \\ 0 \end{array}$$

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Unit 9 Review



1. Plot 6 points on the grid below and connect them to form a hexagon.
List the coordinates of the points you plotted.



Sample answers

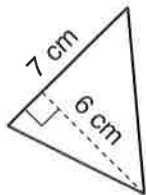
- (-5, -3)
- (-4, 4)
- (1, 5)
- (1, 2)
- (4, -2)
- (0, -5)

Hint: Draw the shape 1st and then plot

Find the area of the figures shown below.
Write the number model you used to find the area.

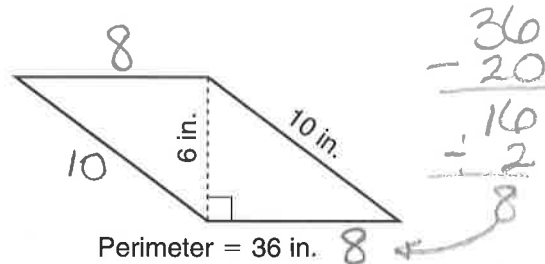
Area of a rectangle: $A = b * h$
 Area of a parallelogram: $A = b * h$
 Area of a triangle: $A = \frac{1}{2} * b * h$

2.



Number model: $7 \times 6 \div 2 = 21$
 Area: 21 cm²
 (unit)

3.



Number model: $8 \times 6 = 48$
 Area: 48 in²
 (unit)

4. On the back of this page, explain how you solved Problem 3.