Graphing and Interpreting Points

Graphing and Interpreting Points: Models and Computation

Name _____ **Date** _____ **Score** _____ / 6

QUICK REVIEW

Plot (x, y) by going right x units and up y units. A shared x makes a vertical segment; a shared y makes a horizontal segment. Count intervals or subtract the coordinates that change.

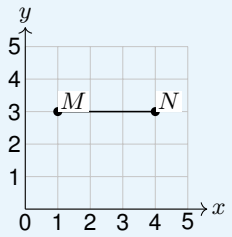
Worked example

How long is the segment from $M(1,3)$ to $N(4,3)$? Is it horizontal or vertical?

1. Both points have $y = 3$, so connect them along the same row.

2. The gap is $4 - 1 = 3$ unit intervals.

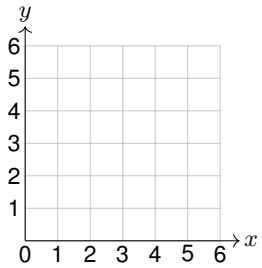
Answer: Horizontal, 3 units long.



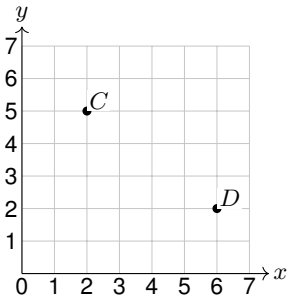
Practice Problems

Show your thinking.

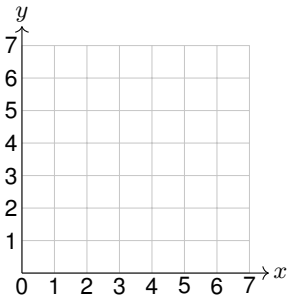
1. Plot and label $A(2,4)$ and $B(5,2)$.



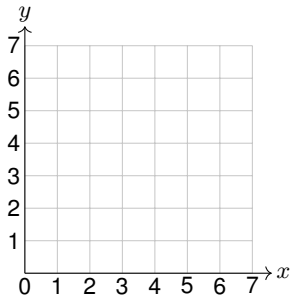
2. Give the ordered pairs of C and D from the plotted grid.



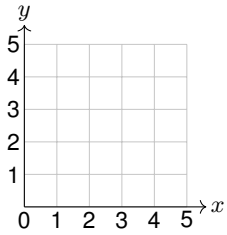
3. Plot $E(3,1)$ and $F(3,6)$ and join them. Which coordinate do they share? Is EF horizontal or vertical?



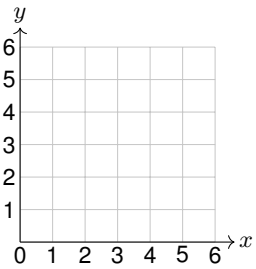
4. Plot $G(1,4)$, $H(6,4)$, and $J(6,6)$. Join GH and HJ. Name the direction of each segment.



5. A printer labels a dot at $(3,2)$ as $K(2,3)$. Explain the mix-up, then plot $K(2,3)$ in the correct place.



6. Plot $A(1,1)$, $B(5,1)$, and $C(5,4)$. Find and plot D so $ABCD$ is a rectangle in that order. Draw its boundary.



Answer Key

1. $A(2, 4)$ and $B(5, 2)$.
2. $C(2, 5)$ and $D(6, 2)$.
3. They share $x = 3$; EF is vertical.
4. GH is horizontal; HJ is vertical.
5. K belongs in column 2, row 3.
6. $D(1, 4)$.

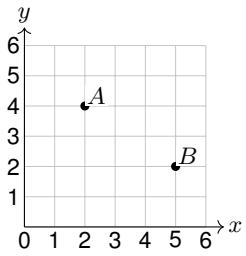
Step-by-Step Solutions

Follow each calculation, then check your own work.

Problem 1

1. For A, move 2 units right, then 4 up from the origin.

2. For B, start over: move 5 units right and 2 up.



Problem 2

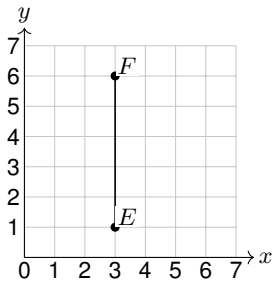
1. Read column 2 and row 5 for C.

2. Read column 6 and row 2 for D. Put the column number first.

Problem 3

1. Both points are in column 3, so no horizontal move is needed between them.

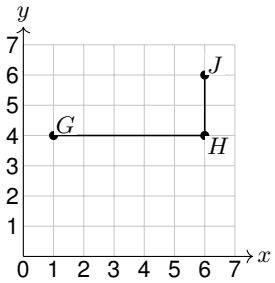
2. Their heights are 1 and 6. Join them up column 3 to make a vertical segment.



Problem 4

1. G and H share $y = 4$ while x changes from 1 to 6, so GH runs across a row.

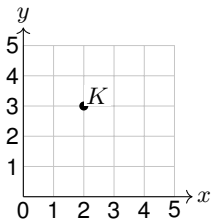
2. H and J share $x = 6$ while y changes from 4 to 6, so HJ runs up a column.



Problem 5

1. The printed dot uses 3 as the horizontal coordinate, but K needs $x = 2$.

2. Move 2 right and 3 up. The printer reversed the coordinate order.

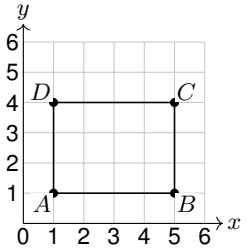


Problem 6

1. AD must be vertical, so D shares A's $x = 1$.

2. CD must be horizontal, so D shares C's $y = 4$. Plot $D(1, 4)$ and close the rectangle.

3. Opposite sides match: the horizontal sides are $5 - 1 = 4$ units, and the vertical sides are $4 - 1 = 3$ units.



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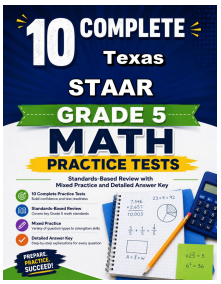

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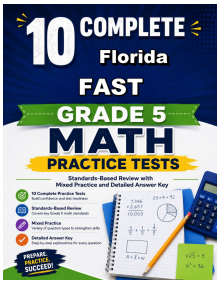

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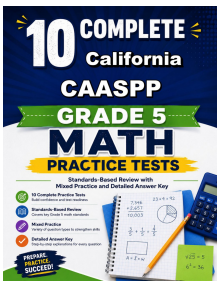

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