

# Directions for Sorting by Characteristic

Put at least 12 words, pictures, diagrams, equations, or graphs on the left side of the next slide. Each item should be able to move independently. Once this is done, clone the page so that you can use the original over and over during the class.

Have students work in pairs and try to come up with as many characteristics on their own. Then come together as a whole class and have students come up to the SMARTBoard and sort the items and give a characteristic.

Once students write their characteristic, usually a rich discussion arises about another way to say the same characteristic (vocabulary!!!)

If students are struggling to find the characteristic that you want, you can give write out the characteristic and the students will have to pull at least three items over to the window.

Lastly, you could ask the students to come up with a challenge for the rest of the class by having them slide over 3 items and have the class guess the characteristic.

In this activity students are using what they know to build their knowledge. Students don't feel intimidated by this activity because they can find three items that have the same color and be correct!

Slides 2-4 are all the same. They would be for students to write down examples on. Slides 5-7 are example slides for this particular lesson for what students might do. Slides 8-9 are different examples of other characteristic sorting examples. Slide 10 is a template for anyones use.

Find 3 or more items with the same characteristic.

Drag them to this space

A.  $y = -3x + 6$

I.  $y = -5$

B.  $y = 2x + 1$

J.  $y = .5x$

C.  $y = 2x - 5$

K.  $y = .5x + 1$

D.  $y = 0$

L.  $y = 1$

E.  $y = 4x - 5$

M.  $y = 3x$

F.  $y = -3x$

N.  $y = 2x + 6$

G.  $y = -x - 5$

O.  $y = -x$

H.  $y = 4x$

P.  $y = 4x + 1$

Name the characteristic

Find 3 or more items with the same characteristic.

Drag them to this space

A.  $y = -3x + 6$

I.  $y = -5$

B.  $y = 2x + 1$

J.  $y = .5x$

C.  $y = 2x - 5$

K.  $y = .5x + 1$

D.  $y = 0$

L.  $y = 1$

E.  $y = 4x - 5$

M.  $y = 3x$

F.  $y = -3x$

N.  $y = 2x + 6$

G.  $y = -x - 5$

O.  $y = -x$

H.  $y = 4x$

P.  $y = 4x + 1$

Name the characteristic

Find 3 or more items with the same characteristic.

Drag them to this space

A.  $y = -3x + 6$

I.  $y = -5$

B.  $y = 2x + 1$

J.  $y = .5x$

C.  $y = 2x - 5$

K.  $y = .5x + 1$

D.  $y = 0$

L.  $y = 1$

E.  $y = 4x - 5$

M.  $y = 3x$

F.  $y = -3x$

N.  $y = 2x + 6$

G.  $y = -x - 5$

O.  $y = -x$

H.  $y = 4x$

P.  $y = 4x + 1$

Name the characteristic

Find 3 or more items with the same characteristic.

*example*

Drag them to this space

A.  $y = -3x + 6$

B.  $y = 2x + 1$

C.  $y = 2x - 5$

E.  $y = 4x - 5$

F.  $y = -3x$

G.  $y = -x - 5$

H.  $y = 4x$

J.  $y = .5x$

K.  $y = .5x + 1$

M.  $y = 3x$

N.  $y = 2x + 6$

O.  $y = -x$

P.  $y = 4x + 1$

I.  $y = -5$

L.  $y = 1$

D.  $y = 0$

Name the characteristic

horizontal line  
(zero slope)  
(flat line)  
( $y =$  line)

Find 3 or more items with the same characteristic.

*example*

A.  $y = -3x + 6$

B.  $y = 2x + 1$

D.  $y = 0$

F.  $y = -3x$

G.  $y = -x - 5$

H.  $y = 4x$

I.  $y = -5$

J.  $y = .5x$

K.  $y = .5x + 1$

L.  $y = 1$

M.  $y = 3x$

O.  $y = -x$

Drag them to this space

N.  $y = 2x + 6$

P.  $y = 4x + 1$

E.  $y = 4x - 5$

C.  $y = 2x - 5$

Name the characteristic

*Positive slope*  
*(Positive coefficient of x)*

Find 3 or more items with the same characteristic.

*example*

A.  $y = -3x + 6$

B.  $y = 2x + 1$

C.  $y = 2x - 5$

D.  $y = 0$

E.  $y = 4x - 5$

G.  $y = -x - 5$

I.  $y = -5$

K.  $y = .5x + 1$

L.  $y = 1$

M.  $y = 3x$

N.  $y = 2x + 6$

P.  $y = 4x + 1$

Drag them to this space

J.  $y = .5x$

F.  $y = -3x$

H.  $y = 4x$

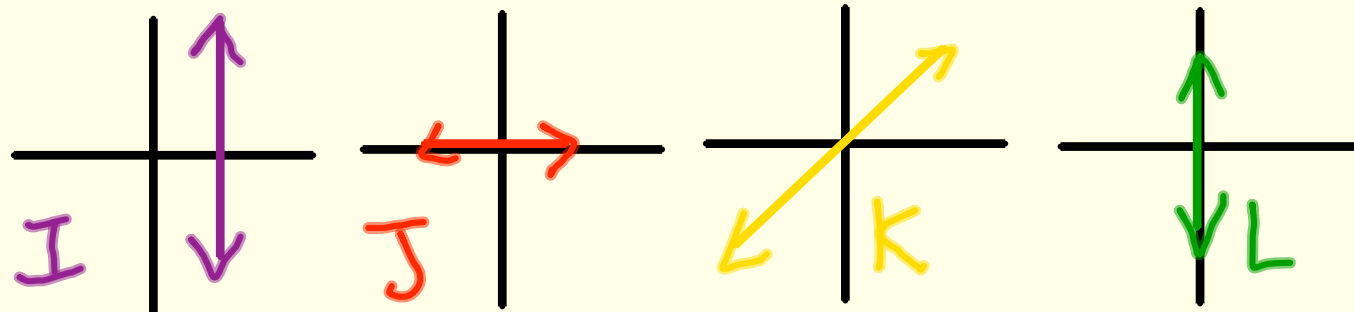
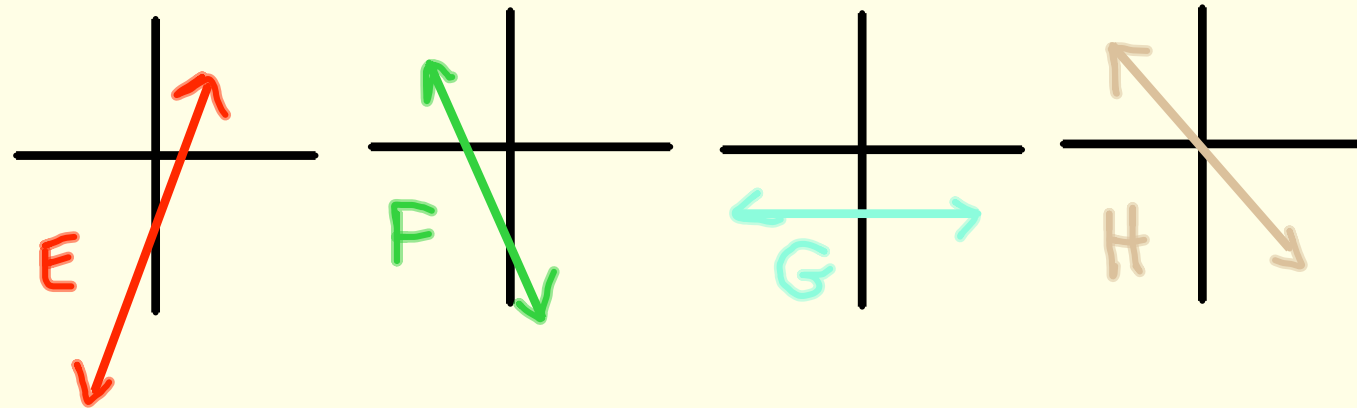
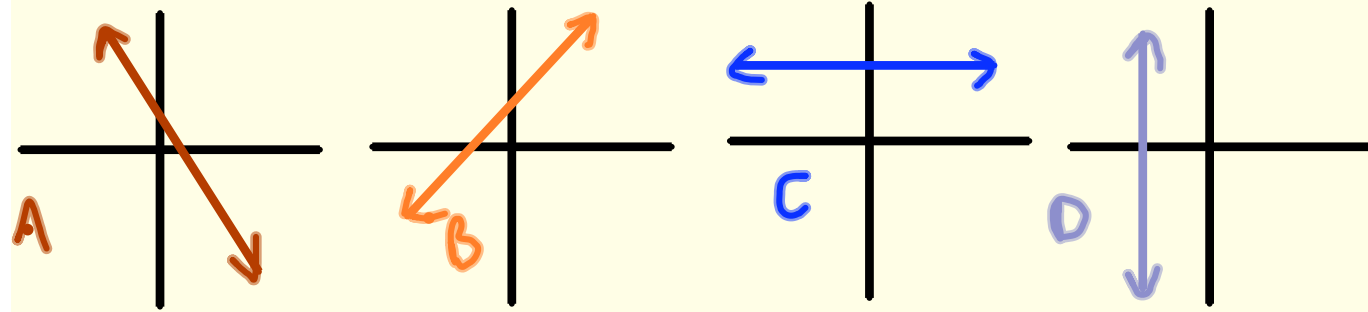
O.  $y = -x$

Name the characteristic

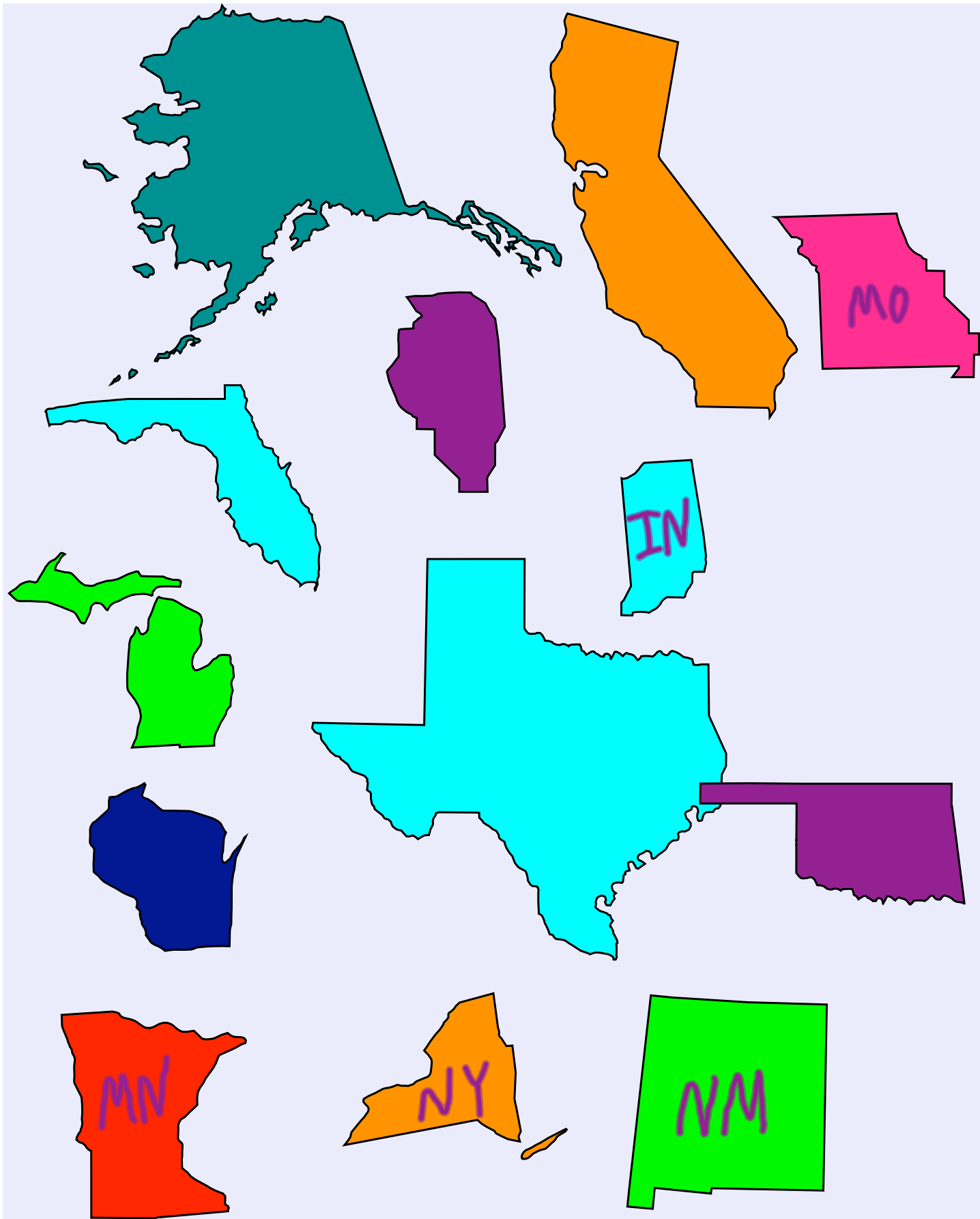
O is the y-intercept  
(goes through  
the origin)

Find 3 or more items with the same characteristic.

Drag them to this space



Name the characteristic



Pick 3 or more  
with the same  
characteristic

Characteristic

Find 3 or more items with the same characteristic.

Drag them to this space

Name the characteristic