A.12A: Decide whether relations represented verbally, tabularly, graphically, and symbolically define a function
(Supporting Standard)

(A.1B; A.1E; A.1F)

1. Look at the relations below.

I.   {(2, 1.5), (5, 3), (–4, –1.5), (–7, –3)}

II. {(1, 1), (2, 3), (5, –5), (0, 0)}

III. {(4, 7), (–3, 3), (–5, –1), (–7, –1)}

IV. {(0, 7), (–3, 10), (0, 15), (5, 6)}

Indicate whether each relation shows a function or not.

Select **ONE** correct answer in each row.

Relation	Function	Not a Function
I	☐	☐
II	☐	☐
III	☐	☐
IV	☐	☐

(A.1B; A.1F; A.1G)

2. Which of the following relationships between domain and range must describe a relation that is **NOT** a function?

A The domain is larger than the range.

B The domain and range values of the relation are equivalent.

C There are two different range values for the same domain value.

D There are two different domain values that have the same range value.
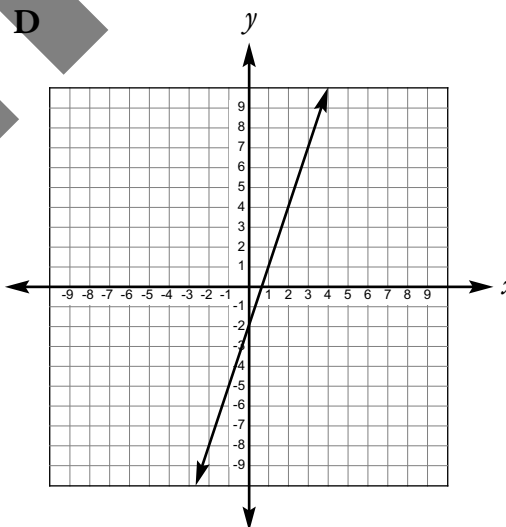
(A.1B; A.1D; A.1F)

3. Which of the following does **NOT** represent a function?

A $y = 3x + 2$

B {(–3, –11), (–1, 1), (0, –2), (–3, 7)}

C

x	f(x)
–2	8
0	–2
1	5
2	8

D

A.3C: Graph linear functions on the coordinate plane and identify key features, including x-intercept, y-intercept, zeros, and slope, in mathematical and real-world problems (Readiness Standard)

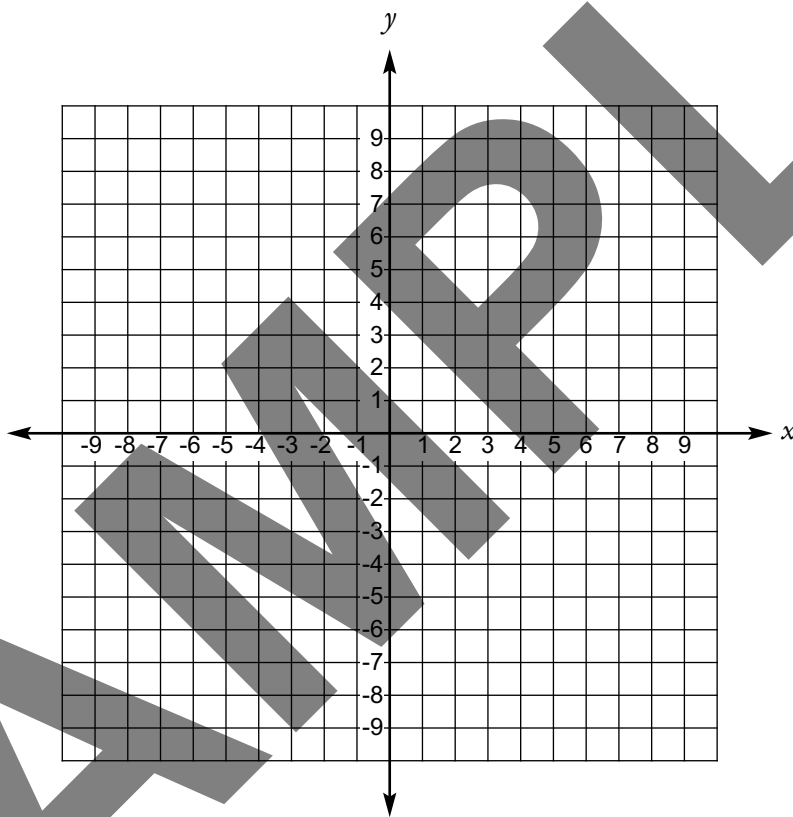*(A.1B; A.1D; A.1F)*

1. Look at the equation below.

$$6x - 3y = 24$$

Plot four points that satisfy the equation.

Plot each point on the coordinate grid.
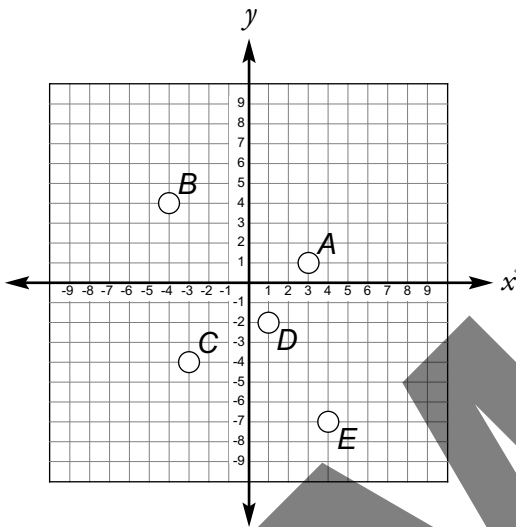
A.3D: Graph the solution set of linear inequalities in two variables on the coordinate plane (Readiness Standard)
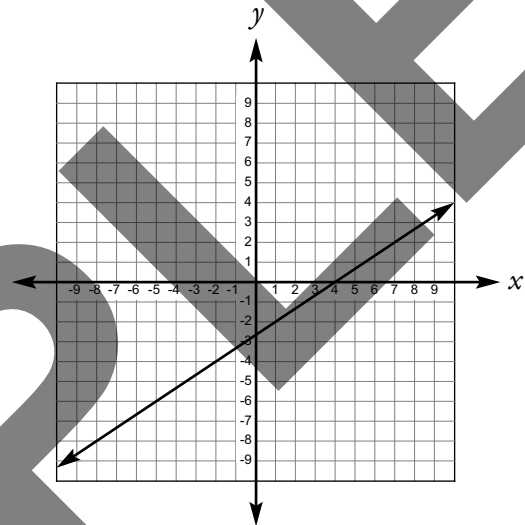
(A.1B; A.1C; A.1D; A.1E; A.1F)

1. Which points satisfy $y < -x$ and $x > -2$?

Shade the **TWO** correct circles that represent the points.

(A.1B; A.1C; A.1E; A.1F)

2. The graph of $2x - 3y = 8$ is shown below.

Which ordered pairs are in the solution set of $2x - 3y > 8$?

Select **TWO** correct answers.

☐ $(-5, 0)$

☐ $(4, 0)$

☐ $(0, -5)$

☐ $(2, 3)$

☐ $(7, -4)$

A.2C: Write linear equations in two variables given a table of values, a graph, and a verbal description (Readiness Standard)

(A.1A; A.1B; A.1D; A.1E; A.1F)

1. The table below shows the temperature for four cities in both degrees Celsius and degrees Fahrenheit.

Local Temperatures

City	°C	°F
City A	40	104
City B	30	86
City C	8	46.4
City D	22	71.6

Write an equation that can be used to convert the temperature in degrees Celsius, C, to the temperature in degrees Fahrenheit, F.

Record your answer in the space provided.

(A.1B; A.1D; A.1F)

2. When x increases by 1, y decreases by 2. When x is 0, y is 7. Which equation represents the relationship between x and y?

A $y = x + 1$

B $y = -2x - 7$

C $y = -2x + 7$

D $y - 2 = x + 1$

(A.1A; A.1B; A.1D; A.1F)

3. Downloading a movie costs $8, and downloading a television episode costs $3. Which equations do **NOT** represent the combinations of x movies and y television episodes Victor can download for $120?

Select **TWO** correct answers.

☐ $3y = 8x + 120$

☐ $8x + 3y = 120$

☐ $y = -\dfrac{8}{3}x + 40$

☐ $y + \dfrac{8}{3}x = 40$

☐ $y = 8x - 120$

(A.1B; A.1D; A.1E; A.1F)

4. Which equation represents the same linear function as the table below?

x	y
–4	5
0	2
2	$\dfrac{1}{2}$
3	$-\dfrac{1}{4}$

A $y = 2x - \dfrac{3}{4}$

B $3x + 4y = 2$

C $-3x - 4y = -8$

D $y + 4 = -\dfrac{3}{4}(x - 5)$