**Training Clients**

**Algebra**

**Unit 3 Line Master 7a**

A trainer is planning the exercise programs for a group of clients.

To start, the trainer wants to determine how many minutes each client wants to spend walking, *x*, and lifting weights, *y*.

1. Client A wants to spend a total of 45 minutes per day walking and lifting weights.

*x* + *y* = 45

a) Predict the properties of the graph of this equation.   
 Consider shape, rate of change, symmetry, and intercepts.

b) Complete the table of values to identify a set of points that meet this criteria.

|  |  |
| --- | --- |
| *x* | *y* |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

c) Use the table of values and the properties you predicted to sketch a graph.

d) Graph *x* + *y* = 45 using technology and compare the graphs.  
 Were your predictions correct? Explain.

**Training Clients** (cont’d)

**Algebra**

**Unit 3 Line Master 7b**

2. Client B wants to spend 15 more minutes walking per day than lifting weights.

*x* – *y* = 15

a) Predict the properties of the graph of this equation.   
 Consider shape, rate of change, symmetry, and intercepts.

b) Complete the table of values to identify a set of points that meet this criteria.

|  |  |
| --- | --- |
| *x* | *y* |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

c) Use the table of values and the properties you predicted to sketch a graph.

d) Graph *x* – *y* = 15 using technology and compare the graphs.

Were your predictions correct? Explain.

**Training Clients** (cont’d)

**Algebra**

**Unit 3 Line Master 7c**

3. Client C wants to spend 3 days running and 2 days lifting per week.   
 They want to spend 180 minutes exercising in all.

3*x* + 2*y* = 180

a) Predict the properties of the graph of this equation.   
 Consider shape, rate of change, symmetry, and intercepts.

b) Complete the table of values to identify a set of points that meet this criteria.

|  |  |
| --- | --- |
| *x* | *y* |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

c) Use the table of values and the properties you predicted to sketch a graph.

d) Graph 3*x* +2*y* = 180 using technology and compare the graphs.

Were your predictions correct? Explain.

**Training Clients** (cont’d)

**Algebra**

**Unit 3 Line Master 7d**

4. Client D does not want to lift weights at all. They have 10 minutes per day to exercise.

*x* = 10

a) Predict the properties of the graph of this equation.   
 Consider shape, rate of change, symmetry, and intercepts.

b) Complete the table of values to identify a set of points that meet this criteria.

|  |  |
| --- | --- |
| *x* | *y* |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

c) Use the table of values and the properties you predicted to sketch a graph.

d) Graph *x* = 10 using technology and compare the graphs.

Were your predictions correct? Explain.