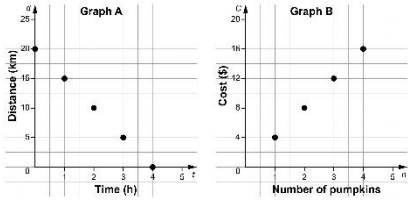
Number

Activity 17 Assessment

Comparing Constant Rates and Initial Values

Comparing Constant Rates and Initial Values

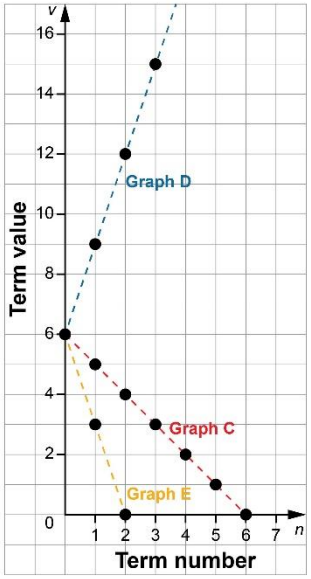
Understands how linear graphs can represent real-life situations



Graph A represents the distance remaining on a 20-km hike, when walking at an average speed of 5 km/h.

Graph B represents the cost of different numbers of pumpkins, when 1 pumpkin costs $4.00.

Compares graphs with the same initial value



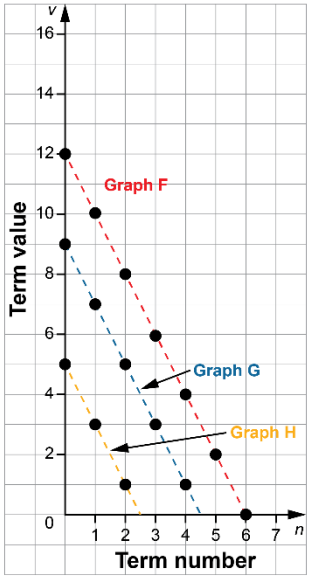
All graphs have the same initial value of 6, because they intersect the vertical axis at that point.

Graph C decreases at a constant rate of –1.

Graph D increases at a constant rate of 3.

Graph E decreases at a constant rate of –3.

Compares graphs with the same constant rate



All graphs have the same constant rate of –2 because they are parallel and go down to the right.

Graph F has an initial value of 12.

Graph G has an initial value of 9.

Graph H has an initial value of 5.

Solves problems involving constant rates and initial values

Kim is planning a fundraiser.
Venue A costs $100, plus $15 per person.
Venue B costs $200, plus $10 per person.
Which venue is the better deal? Why?

Make tables of values.

Venue A

Number of people	Cost ($)
0	100
10	250
20	400
30	550

Venue B

Number of people	Cost ($)
0	200
10	300
20	400
30	500

If fewer than 20 people attend (unlikely), then Venue A is cheaper.
If more than 20 people attend, Venue B is cheaper.

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Observations/Documentation			