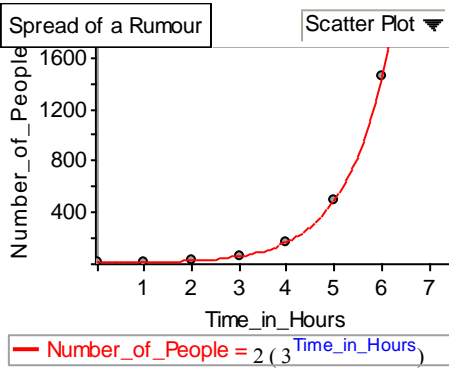
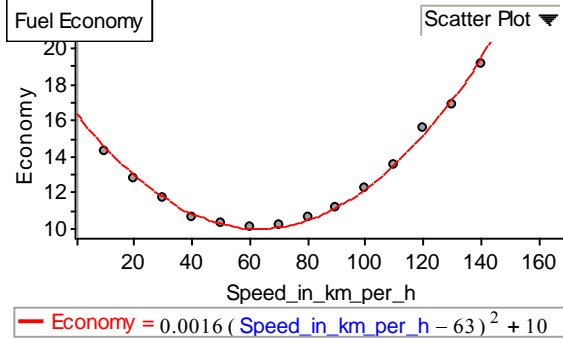


5.6.2 Are you the Master of Your Domain and Range?

Part A: Peer Coaching

A coaches B	B coaches A																
<p>1. How fast does a rumour spread?</p> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px;"> <div style="display: flex; justify-content: space-between;"> Spread of a Rumour Scatter Plot ▼ </div>  </div>	<p>2. The graph models the average fuel economy of a particular car, in litres per 100 km, at various speeds.</p> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px;"> <div style="display: flex; justify-content: space-between;"> Fuel Economy Scatter Plot ▼ </div>  </div> <p>(Source: Mathematics 12: Preparing for College & Apprenticeship, McGraw-Hill Ryerson, 2002, p. 358)</p>																
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #e1f5fe;"> <th style="width: 50%;">Identify:</th> <th style="width: 50%;">Reasons</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;"> Function Type <input type="checkbox"/> linear <input type="checkbox"/> quadratic <input type="checkbox"/> exponential <input type="checkbox"/> none of the above </td> <td style="padding: 5px;"></td> </tr> <tr> <td style="padding: 5px;">Domain:</td> <td style="padding: 5px;"></td> </tr> <tr> <td style="padding: 5px;">Range:</td> <td style="padding: 5px;"></td> </tr> </tbody> </table>	Identify:	Reasons	Function Type <input type="checkbox"/> linear <input type="checkbox"/> quadratic <input type="checkbox"/> exponential <input type="checkbox"/> none of the above		Domain:		Range:		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #e1f5fe;"> <th style="width: 50%;">Identify:</th> <th style="width: 50%;">Reasons</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;"> Function Type <input type="checkbox"/> linear <input type="checkbox"/> quadratic <input type="checkbox"/> exponential <input type="checkbox"/> none of the above </td> <td style="padding: 5px;"></td> </tr> <tr> <td style="padding: 5px;">Domain:</td> <td style="padding: 5px;"></td> </tr> <tr> <td style="padding: 5px;">Range:</td> <td style="padding: 5px;"></td> </tr> </tbody> </table>	Identify:	Reasons	Function Type <input type="checkbox"/> linear <input type="checkbox"/> quadratic <input type="checkbox"/> exponential <input type="checkbox"/> none of the above		Domain:		Range:	
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<p>3. The table describes the cooling of a cup of coffee.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 5px;"> <tr> <td style="padding: 2px;">Time (min)</td> <td style="padding: 2px;">0</td> <td style="padding: 2px;">4</td> <td style="padding: 2px;">8</td> <td style="padding: 2px;">12</td> <td style="padding: 2px;">16</td> <td style="padding: 2px;">20</td> </tr> <tr> <td style="padding: 2px;">Temperature (°C)</td> <td style="padding: 2px;">55</td> <td style="padding: 2px;">47</td> <td style="padding: 2px;">40</td> <td style="padding: 2px;">34</td> <td style="padding: 2px;">29</td> <td style="padding: 2px;">25</td> </tr> </table>	Time (min)	0	4	8	12	16	20	Temperature (°C)	55	47	40	34	29	25	<p>4. If you invest \$5000 in a stock that is increasing in value at a rate of 12% per year, then the value of your stock is given by $A = 5000(1.12)^n$, where A is the amount in dollars and n is the number of years.</p>		
Time (min)	0	4	8	12	16	20											
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5.6.2 Are you the Master of Your Domain and Range? (continued)

Part B: Individual

1. The table below shows that height of a baseball, in metres, after t seconds.

Time (s)	Height of Ball (m)
0	0.8
1	25.9
2	41.2
3	46.7
4	42.4
5	28.3

Identify:	Reasons
Function Type <input type="checkbox"/> linear <input type="checkbox"/> quadratic <input type="checkbox"/> exponential <input type="checkbox"/> none of the above	
Domain:	
Range:	

2. A computer virus attached to an e-mail can spread rapidly. Once the attachment is opened, the virus will cause an infected e-mail to be sent to everyone in the recipient's address book. Assume that on average, a person has 15 addresses in his or her address book and that people read their e-mail once a day. (Source: **Advanced Functions and Introductory Calculus**, Nelson, 2002, p.93) The following table shows the spread of one computer virus through e-mail over the course of 6 days.

Time (days)	Number of E-mails with Virus
1	15
2	225
3	3 375
4	50 625
5	759 375
6	11 390 625

Identify:	Reasons
Function Type <input type="checkbox"/> linear <input type="checkbox"/> quadratic <input type="checkbox"/> exponential <input type="checkbox"/> none of the above	
Domain:	
Range:	

3. A herbicide was sprayed onto a field containing an estimated 5000 weeds. The number of weeds, N , still alive after t days can be modelled by $N(t) = 5000(0.4)^t$

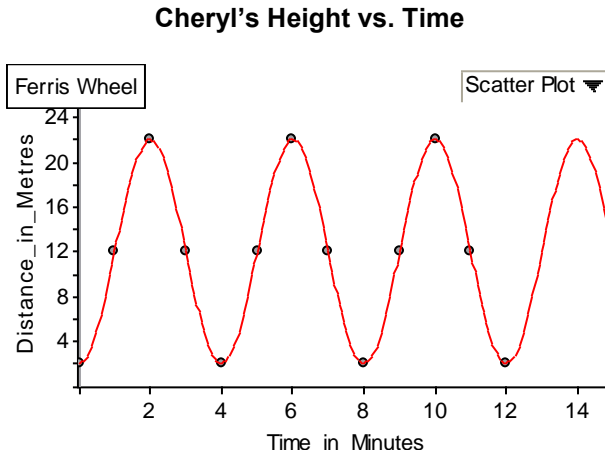
Identify:	Reasons
Function Type <input type="checkbox"/> linear <input type="checkbox"/> quadratic <input type="checkbox"/> exponential <input type="checkbox"/> none of the above	
Domain:	
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4. $(\text{Pizza})^2$ charges \$10 for a large pizza plus \$2 per topping. The total cost of the pizza, C , can be modelled by $C = 2n + 10$, where n is the number of toppings.

Identify:	Reasons
Function Type <input type="checkbox"/> linear <input type="checkbox"/> quadratic <input type="checkbox"/> exponential <input type="checkbox"/> none of the above	
Domain:	
Range:	

5.6.2 Are you the Master of Your Domain and Range? (continued)

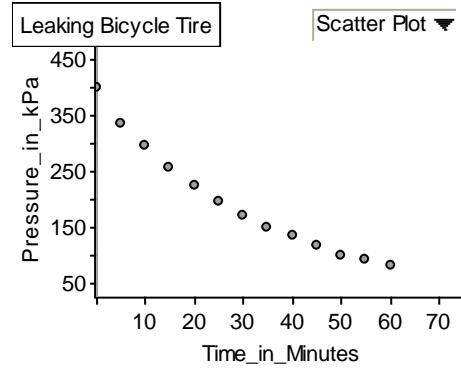
5. Cheryl is riding a Ferris wheel. The graph below shows Cheryl's height above the ground.



Identify:	Reasons
Function Type <input type="checkbox"/> linear <input type="checkbox"/> quadratic <input type="checkbox"/> exponential <input type="checkbox"/> none of the above	
Domain:	
Range:	

6.

Tire Pressure vs. Time



(Source of data: **Preparing for the new Grade 11 Mathematics: Growth & Change**, Peter Taylor, Queen's University, 1999, p. 105)

Identify:	Reasons
Function Type <input type="checkbox"/> linear <input type="checkbox"/> quadratic <input type="checkbox"/> exponential <input type="checkbox"/> none of the above	
Domain:	
Range:	