




Check Your Understanding – Linear Function Word Problems

The table below identifies the key concepts from this unit.

1. Check your understanding by completing these questions.
2. Check your answers in the key provided.
3. In the table below, highlight the questions you got correct.
4. Ask peers/Dr. James about concepts where you can improve.

Key Concepts	 Mild	 Medium	 Spicy
Writing an Equation (Rule) from Words	1a, 2a	3a, 4ab	5a, 6a
Solving for Y	1b, 2b	3b, 4c	5b
Solving for X	1c, 2c	3c	5c, 6b

1. Aylmer Taxi charges \$5.50 for the initial pick-up fee, plus an additional \$0.75 per km.

a. Write the linear equation that represents this situation.

b. Kevin needs to get to the Ottawa airport, which is 25km from Aylmer. How much will it cost?

c. Doug hired a taxi and at the end of his trip paid \$37. How far was Doug's taxi ride?

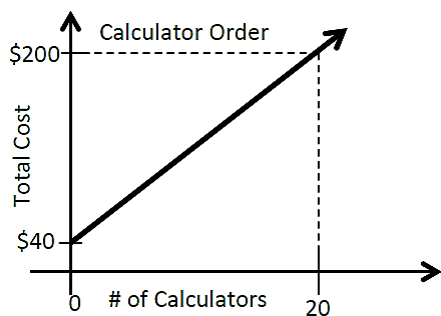
2. A bakery has decided to only sell cookies. They make a profit of \$0.82 per cookie sold

a. Write the linear equation that represents this situation.

b. If the bakery sells 1200 cookies, how much profit will they make?

c. If the bakery makes a profit of \$715.04, how many cookies did they sell?

3. The following graph shows the cost of ordering custom PWHS calculators. There is a fixed shipping fee, plus a charge per calculator ordered.



Notice this graph passes through the points (0,40) and (20, 200).

Use this to find the equation!

a. Write the linear equation that represents this situation.

b. How much money does the company charge for shipping? How much does the company charge per calculator?

c. If the school orders 35 calculators, what is the total cost for the order?

4. An electrician charges an emergency fee to make house calls on the weekend, plus an hourly rate. On one weekend, the electrician worked for 2 hours and earned \$190. On another weekend, the electrician worked 7 hours and made \$490.

a. Write the linear equation that represents this situation

b. How much money will the electrician make if they work for 4 hours?

c. If the electrician made \$850, how many hours did they work?

5. The local printer charges a flat fee of \$2.50 to process online orders, plus a small charge per page. Lisa made an order of 75 pages and the total she paid the printer was \$21.25.

a. Write the linear equation that represents this situation.

b. If you place an order with 20 pages, how much will it cost?

c. If you place an order and it costs \$77.50, how many pages were printed?

6. Julie's bathtub has 84L of water in it. Julie then allowed the bathtub to start draining. There was a clog, so it was draining very slowly, at a constant rate. After 3 minutes, there were still 36L of water left in the bathtub.

a. Write the linear equation that represents this situation.

b. How long will it take for the bathtub to be completely empty?

Answer Key

1a. $y = 0.75x + 5.50$	1b. \$24.25	1c. 42 km
2a. $y = 0.82x$	2b. \$984	2c. 872 cookies
3a. $y = 8x + 40$	3b. Shipping is \$40. Each calculator is \$8	3c. \$320
4a. $y = 60x + 70$	4b. \$310	4c. 13 hours
5a. $y = 0.25x + 2.50$	5b. \$7.50	5c. 300 pages
6a. $-16x + 84$	6b. 5.25 minutes	