

## Ma 9 – Flashback #5

- Determine the linear equation that models the following pattern: 10, 7, 4, .....
- A population of bacteria doubles every hour. If there are 12 bacteria at the start of the hour, how many bacteria are there after 3 hours? 20 hours? 2 days?
- Jane wants to host a party at the community hall. The hall charges a flat fee of \$150 plus an additional fee of \$5 per person.
  - create a table of values to show the costs for the first 10 people.
  - What equation could model this situation?
  - how much would it cost if 40 people came to the party?
- Simplify:  $\frac{(3^3-5) \cdot 3 \div (-11) + 4}{4^2 - (3^2 \cdot 6)^0}$
- Determine the quotient:  $\frac{12x^2 - 8xy}{4x}$
- Solve the following proportion:  $\frac{1}{x} = \frac{5.9}{76.7}$
- Mandy wants to wallpaper her room. The dimensions of the floor are 5.2 m by 3.1 m. The walls are 2.5 m high. There is one window that is 1.5 m by 1.5 m. The closet and bedroom door are both 2.2 m by 0.75 m.
  - What is the total surface area that will be covered with wallpaper?
  - If one roll of wall paper covers 5.2 m<sup>2</sup>, how many rolls should she purchase?
- Draw algebra tile model for the **opposite** of  $-3x^2 + 2x - 1$
- A telephone pole that is 12 m tall casts a shadow of 2 m long. What is the length of the shadow cast by a student who is 1.5 m tall?
- Solve and verify:  $12x - 0.7 = 5x + 3.2$