Show You Know

| Ex. 1  Simplify each product or quotient.     1. b) c) d) | |
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| Ex. 2  Simplify and evaluate where possible.   1. b) c) d) | |
| Ex. 3  Manitoba Agriculture, Food and Rural Initiatives staff  conducted a grasshopper count. In one 25-km2 area,  there were 401 000 000 grasshoppers. Use the following  table to assess the degree of grasshopper infestation  in this area. | |

Practice

1. Write each expression with positive exponents.

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1. A culture of bacteria in a lab contains 400 bacterium cells. The number of cells doubles every hour. This situation can be modeled by the equation B = 400(2)h, where B is the estimated number of bacteria and h is the time in hours. How many bacteria were present
   1. after 3 h?
   2. after 24 h?
   3. 3 h ago?
2. Suppose you win the opportunity to receive a cash prize of $15 000 or double your money each year for a period of 25 years starting with an initial payment to you of $0.01. The value of your winnings can be determined using the formula A = 0.01(2) n, where A is the payment at the end of n years.
   1. What is the value of the payment you would receive after 3 years? after 10 years? after 25 years?
   2. Which offer would you accept? Explain why.