

Activity 4 Assessment

Determining Term Numbers and Term Values

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Determines missing elements in linear and non-linear patterns

1, 2, __, 8, 16, 32, __, 128
 “I can see that each term is twice as great as the previous term. So, the missing terms are 4 and 64.”

Writes and uses an equation to determine pattern values

What is the value of this pattern when $x = 50$?

x	y
0	9
1	7
2	5
3	3

“An equation to represent this pattern is $y = -2x + 9$.
 When $x = 50$,
 $-2x + 9 = -2(50) + 9$
 $= -91$
 When x is 50, y is -91 .”

Writes and uses an equation to determine a term number when term value is known

The equation $y = -2x + 9$ represents a pattern.
 Which term in this pattern has a value of -41 ?

“I need to find a value of x so that $-41 = -2x + 9$.
 This means that -41 is 9 greater than $-2x$.
 So, $-41 - 9 = -2x$, or $-50 = -2x$.
 Using mental math, this is $x = 25$.”

Develops and uses linear equations to solve applied problems

Sky pays an annual gym membership fee of \$50 and monthly fees of \$25. Write an equation to describe the total cost. If Sky keeps their membership for 8 months, how much will they have spent?

“I’ll let the number of months Sky is a member be x . The total cost of membership is
 $y = 50 + 25x$.
 When $x = 8$,
 $y = 50 + 25(8)$
 $= 50 + 200$
 $= 250$
 Sky will pay \$250 for 8 months of membership.”

Observations/Documentation