MEDIA clips

Ron Lancaster

Tall Guys

Why do tall guys find it easier to get dates than us normal-sized guys?

They can see farther. There's a simple formula you can use to calculate the distance (in kilometres) to the horizon from any vantage point, says physicist Robert Matthews of Britain's Aston University: Multiply your height in metres by 10, add on a third to the result and take the square root. Thus a six-footer can see 4.939 km compared with 4.690 km for a normal-sized person.

Source: "Ask a Journalist," *Toronto Globe and Mail*, September 20, 2002

1. Write an equation that relates height, h (in meters), to distance to the horizon, d (in kilometers).

2. Find how far a person can see to the horizon for each of the heights above ground level shown in **table 1 ("Tall Guys")**. Does anything in particular about the answers surprise you?

3. How far can you see (the distance to the horizon) from the 342-meter-high outdoor observation deck of the CN Tower in Toronto?

4. How high up would you be if the distance to the horizon is 50 km?

Table 1 ("Tall Guys")

Height above Ground Level (m)	Distance to the Horizon (km)
25	
50	
75	
100	

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Fibs

The "Fib"—so named by GottaBook blogger Gregory K. Pincus—is a tightly written poem that uses the Fibonacci sequence as its inspiration.

The Fibonacci progression is a mathematical formula that starts with 0 and 1 and then continues to add numbers that are equal to the sum of the previous two numbers. Thus, the first seven numbers in the sequence are: 0-1-1-2-3-5-8.

To write a Fib, a more complicated version of the classic, highly constrained haiku, the poet composes a six-line poem that has the correct number of syllables in each line corresponding to each digit in the sequence. (The real first line of each Fib is silence.)

Johanna Wasylik, who lives on a farm in Alberta and homeschools her three children, said the Fib form was simple enough for her kids to write poems. "It's much easier for even a young child to come up with something that sounds pretty good and to be pleased with it," she said. Her 8-year-old daughter wrote:

Cat
Sun
Lying
On the deck
Curled up, tail wrapped 'round
I think she's having lots of fun

Source: Motoko Rich, "And It Goes Like This: 0-1-1-2-3-5-8," *New York Times*, April 14, 2006

1. Verify that the poem created by Johanna Wasylik's daughter is a Fib.

2. If the requirement of having exactly six lines were dropped, how many syllables would each line of a twelve-line Fib have?

3. (*a*) Find the total number of syllables in a six-line Fib.

   (*b*) Find the total number of syllables in a twelve-line Fib.

4. Is the total number of syllables in a twelve-line Fib twice the number of syllables in a six-line Fib?

5. Create your own six-line Fib.

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MEDIA CLIPS solutions

"Tall Guys" answers

1. The distance to the horizon can be calculated by simplifying the expression

$$d = \sqrt{10h + \frac{10h}{3}} = \sqrt{\frac{40h}{3}}.$$

2. You might have expected that when the height above ground level is doubled, you can then see twice as far. As **table 2 ("Tall Guys")** shows, this assumption is *not* valid. Note, however, that quadrupling the height above ground level results in being able to see twice as far. This relationship is a fundamental property of the square root function.

3. From the outdoor observation deck of the CN Tower in Toronto, the distance to the horizon is nearly equal to 67.5 km:

$$\sqrt{\frac{40(342)}{3}} \approx 67.5 \text{ km}$$

4. The distance to the horizon is 50 km when your height above ground level is 187.5 m:

$$\sqrt{\frac{40x}{3}} = 50$$

$$\frac{40x}{3} = 2500$$

$$x = 187.5 \text{ m}$$

Table 2 ("Tall Guys")

Height above Ground Level (m)	Distance to the Horizon (km)
25	18.26
50	25.82
75	31.62
100	36.51

"Fibs" answers

1. The poem has six lines, and the number of syllables per line is 1, 1, 2, 3, 5, and 8.

2. The number of syllables per line would be 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, and 144.

3. (*a*) The total number of syllables in a six-line Fib is 20.
   (*b*) The total number of syllables in a twelve-line Fib is 376.

4. No, there are almost 19 times as many syllables in a twelve-line Fib as there are in a six-line Fib.

5. Answers will vary.

   Additional information about Fibs can be found at the following Web sites:

   - http://en.wikipedia.org/wiki/Fib_(poetry)
   - http://gottabook.blogspot.com/2006/04/fib.html
   - http://www.fibetry.com/
   - http://www.nytimes.com/2006/04/14/books/14fibo.html?_r=1&ex=1145419200&en=e0ccb44acd92493d&ei=5087%0A&oref=slogin
   - http://www.poetryfoundation.org/archive/print.html?id=180219

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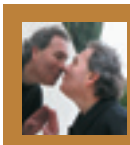

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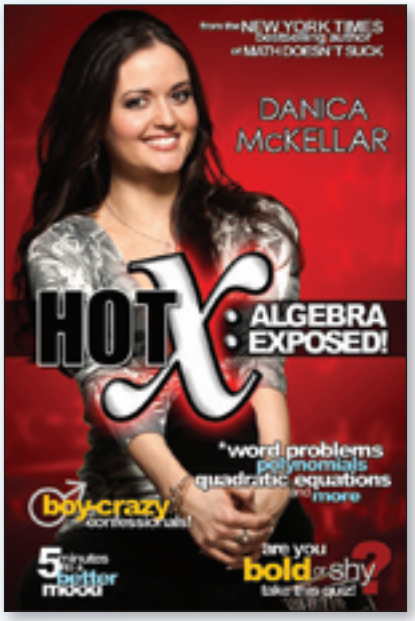

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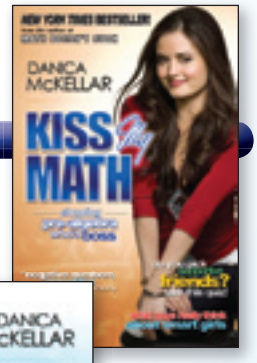

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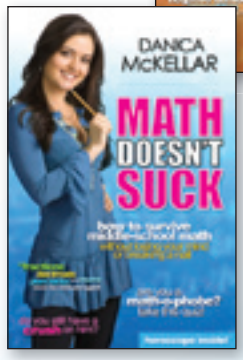

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