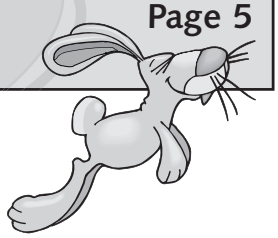


Hippity Hoppity

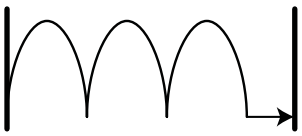
You will be approximating the length of a hop by counting the number of times it takes you to hop a given distance. Of course, you probably will not hop the exact distance, so there will be some extra measurements factored in. You will conduct your measurements at four different stations. Within your group, each member will be designated as the Hopper for one of the stations. The Hopper will conduct two series of hops: a near hop in which the Hopper stops before the finish line and a far hop in which the Hopper stops beyond the finish the line. Each station requires a different type of equation to calculate the length of the hops. Follow the directions and samples carefully.

Station 1 (Hop – Hop – Hop)

Near Hop: Hop until you are just shy of the finish line. Record the number of hops and measure the remaining distance as "extra."

Far Hop: Hop until you are just past the finish line. Record the number of hops and then measure the distance back to the finish line. (This extra distance should be negative.)

EXAMPLE (NEAR HOP)



Let x = Length of each hop
# of Hops = 3
Extra Distance = 24"
Total Distance = 150"
Hop Length = 42"

Equation:

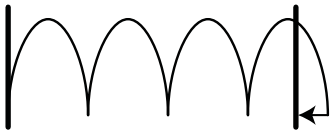
$3x + 24 = 150$
$-24 \quad -24$
$3x = 126$
$\frac{3x}{3} = \frac{126}{3}$
$x = 42$

IN WORDS... 3 hops plus 24 inches is the same distance as 150 inches.

SO... 3 hops is the same distance as 126.

THEREFORE... each hop is 42 inches long.

EXAMPLE (FAR HOP)



Let x = Length of each hop
# of Hops = 4
Extra Distance = 17"
Total Distance = 150"
Hop Length =

Equation:

$4x - 17 = 150$

IN WORDS... _____

SO... _____

THEREFORE... _____

Hippity Hoppity *(contined)*

Station 1 (continued)

STATION (NEAR HOP)

Let x = _____

# of Hops = _____

Extra Distance = _____

Total Distance = _____

Hop Length = ☐

Equation:

_____

IN WORDS... _____

SO... _____

THEREFORE... _____

STATION (FAR HOP)

Let x = _____

# of Hops = _____

Extra Distance = _____

Total Distance = _____

Hop Length = ☐

Equation:

_____

IN WORDS... _____

SO... _____

THEREFORE... _____