

## Matching Functions

Create equations that describe numerical relationships

how long to make 10 batches?  
how about 5?

1 Emily works at a donut factory. It takes her 23 minutes to prepare the dough. Each batch takes 4 and half minutes to cook. Which equation represents how many minutes it takes for Emily to make $x$ batches?	$y = 23 + 4.5x$	A
2 Jake is selling charm bracelets. He spends 23 dollars on supplies but makes \$4.50 on each bracelet he sells. Which equation represents Jake's profit for $x$ bracelets sold?	$y = -23 + 4.5x$	C
3 Sara started a lawn mowing business. After purchasing gas for her mower for \$4.50, she makes 23 dollars for each lawn that she mows. Which equation represents Sara's profit after mowing $x$ lawns?	$y = -4.5 + 23x$	J
4 Bradley the crocodile weighs 23 kilograms. His veterinarian wants him to be on a diet to lose 4.5 kg each month. Which equation represents Bradley's weight after $x$ months?	$y = 23 - 4.5x$	B
5 At a recent shopping trip to Target Kim purchases deodorant sticks for \$4.50 each, and Blu-ray discs for 23 dollars each. If Kim spent a total of 73 dollars, which equation could be used to represent how much she spent on each item?	$4.5x + 23y = 73$	I
6 Josie is a deep sea diver. She is gazing at a coral reef 23 meters below sea level. She decides to descend deeper into the ocean depths at a rate of 4.5 meters per second. Which equation represents Josie's distance below sea level after $x$ seconds?	$y = -23 - 4.5x$	D

A. $y = 4.5x + 23$	B. $y = -4.5x + 23$
C. $y = 4.5x - 23$	D. $y = -4.5x - 23$
E. $y = 4.5x + 73$	F. $y = 23x + 4.5$
G. $y = -23x + 4.5$	H. $y = -23x - 4.5$
I. $4.5x + 23y = 73$	J. $y = 23x - 4.5$
K. $73x + 23y = 4.5$	L. $y = 23x + 73$

Write your own scenario for H.

<p><b>1</b> Jeremiah has 73 dollars to spend on video games that cost 23 dollars each, and beef jerky that cost 4.50 each. Which inequality represents how many of each item Jeremiah can purchase?</p>	$73 \geq 23x + 4.5y$ <p style="text-align: right;">J</p>
<p><b>2</b> Kim's race car can reach a maximum speed of 73 kilometers per hour. She is currently traveling 23 kilometers per hour. Which inequality represents how much faster Kim's car can go before reaching top speed?</p>	$73 \geq 23 + x$ <p style="text-align: right;">B</p>
<p><b>3</b> Wilbur the pig is on a diet. He currently weighs 23 pounds but the farmer wants to fatten him up to at least 73 pounds. If Wilbur gains 4.5 pounds each week, which inequality will represent the number of pounds that Wilbur needs to gain?</p>	$23 + 4.5x \geq 73$ <p style="text-align: right;">C</p>
<p><b>4</b> A hot air balloon begins descending from 73 kilometers above the earth at a rate of 4.5 km per minute. Which inequality represents the time in minutes when the balloon have an altitude less than 23 km.</p>	$73 - 4.5x < 23$ <p style="text-align: right;">G</p>
<p><b>5</b> After training 73 Dark Elixir Troops in Clash of Clans, Jacob takes his army to battle. He wants to have at least 23 troops after the fight. Which inequality represents the number of troops Jacob can lose?</p>	$73 - x \geq 23$ <p style="text-align: right;">H</p>

<p>A. <math>23 - x &gt; 73</math></p>	<p>B. <math>23 + x \leq 73</math></p>
<p>C. <math>23 + 4.5x \geq 73</math></p>	<p>D. <math>73 + x &lt; 23</math></p>
<p>E. <math>73 - x &lt; 23</math></p>	<p>F. <math>23 - x \leq 73</math></p>
<p>G. <math>73 - 4.5x &lt; 23</math></p>	<p>H. <math>73 - x \geq 23</math></p>
<p>I. <math>73 + 4.5x &lt; 23</math></p>	<p>J. <math>23x + 4.5y \leq 73</math></p>
<p>K. <math>73 &lt; 25x + 85</math></p>	<p>L. <math>4.5x + 73 \leq 23</math></p>