
= 36
80
?
70 ÷ x = 10
20
x
The Hidden World of
Garbage
Multi-Digit Numbers
Katie McKissick

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Garbage on the Brain

It's stinky. It's smelly. Chances are, you've probably never thought much about it. It's garbage. Can you remember the last thing you threw away? Was it an apple core? Was it a napkin? Was it something that could be **recycled**? People might not spend hours each day thinking about trash. But, what and how things are thrown away are important.

How much garbage do people make in a day, a week, or even a year? How much does a whole city, or even the whole world, throw away? The amount of garbage must be immense! What happens to it? Why doesn't garbage fill most streets? For something people don't spend a lot of time thinking about, there sure are a lot of questions about garbage!



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Life Cycle of Garbage

It might not seem like it, but garbage can be a big deal—a very big deal. On average, one person makes about 4 pounds (2 kilograms) of garbage per day. That totals 1,460 lbs. (662 kg) each year. That's about how much a cow weighs!

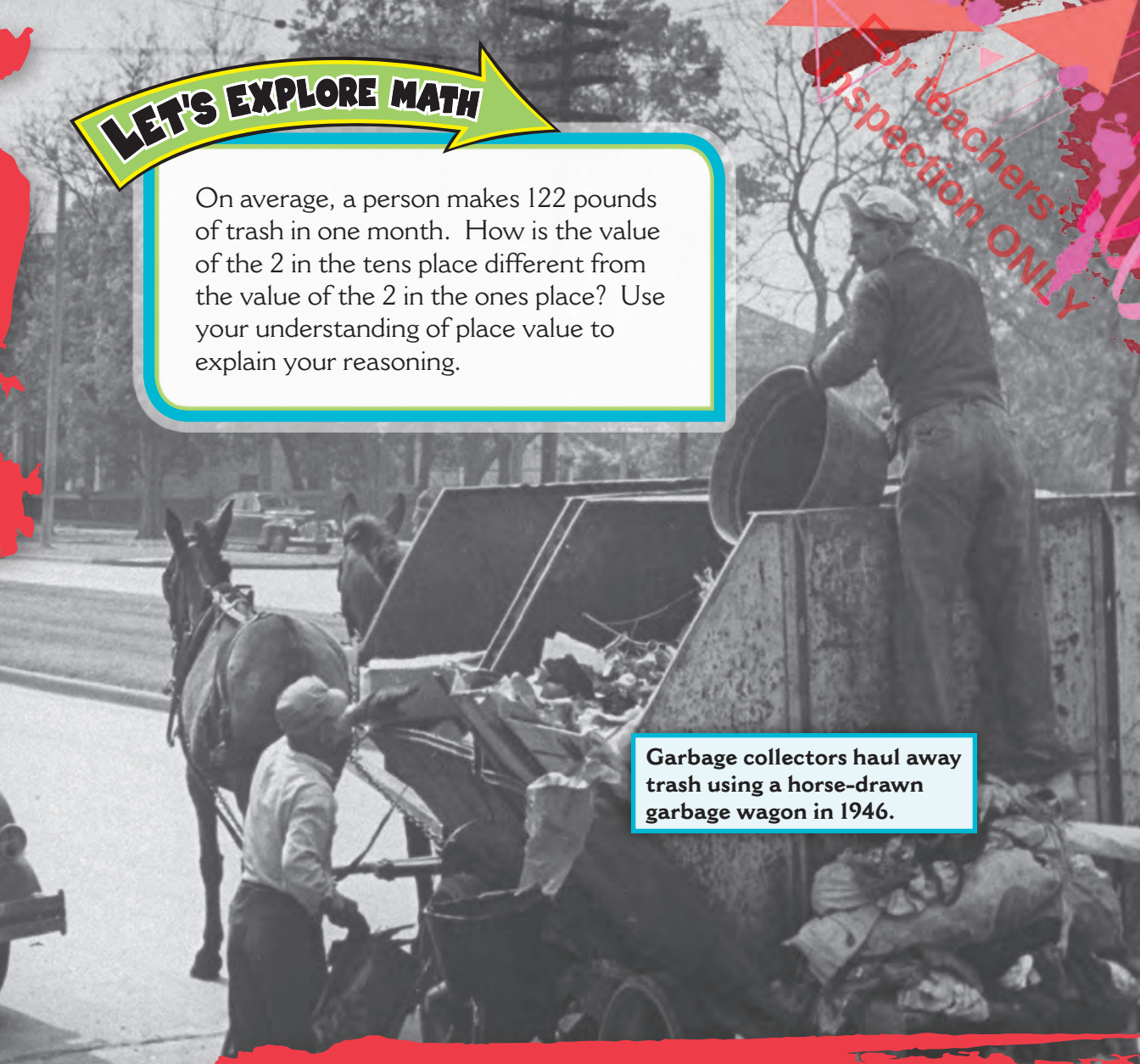
All of that garbage needs to go somewhere. Otherwise, the streets would be full of stale bread, dirty diapers, and brown apple cores. That's where garbage collectors come in. They collect garbage with trucks. Garbage trucks have been around since the 1800s. But, how they look has changed quite a bit. They started as open-air carts hauled by horses. As carts rolled down the roads, garbage often flew out of the cart and back into the street! It wasn't until the 1920s that closed trucks made their way into common use.



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Let's Explore Math

On average, a person makes 122 pounds of trash in one month. How is the value of the 2 in the tens place different from the value of the 2 in the ones place? Use your understanding of place value to explain your reasoning.



Garbage collectors haul away trash using a horse-drawn garbage wagon in 1946.

Garbage trucks of today are huge, powerful machines. One truck can haul garbage from more than 800 houses. And each truck can hold more than 10 tons (9,072 kg) of garbage! Once collected, the trash is taken to a transfer station.

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Drivers move garbage at a transfer station where it will be sorted into groups.

The staff at the transfer station collects and sorts the garbage. First, they must unload the trucks as they come in from the local community. Some transfer stations **compact** garbage into a smaller size. It then gets taken away to a **landfill**. Other transfer stations sort garbage before compacting it. That requires more people. But, it is more **eco-friendly**.

Many transfer stations sort items into four main groups: **recycling**, waste-to-energy, **compost**, and landfill. First, staff members group items to send to recycling centers. This garbage can be reused. Then, the workers place items into a waste-to-energy group. These items can be changed into clean **energy**. Next, they place old food and plants in a compost group. Compost is a mixture of discarded food and plants that farmers use to improve the soil. The rest of the items are put in a landfill group. This is where most garbage goes.

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A man sorts paper products at a recycling center.