# Real-world Scenario Race

**STAAR examples**

1. A gas company charges $16 a month service fee and $0.6924 per hundred cubic feet of natural gas used during a month. Write an equation that best represents *y*, the gas company's monthly charges in dollars for using *x* hundred cubic feet of natural gas?

2. Rhonda's job is to drive a car for a company. Each month she is paid the same salary. She is also paid extra money for the number of miles she drives the car each month. In July Rhonda drove 640 miles and was paid a total of $3,502.00. In August Rhonda drove 820 miles and was paid a total of $3,601.00. Write a function that can be used to find *y*, the total amount she is paid in a month if she drives *x* miles?

3. A water tank currently contains 275 gallons of water. The amount of water in the tank will decrease at a constant rate of 15 gallons per week. Write a function that can be used to find *t*, the total number of gallons of water in the tank after *w* weeks.

4. A coach is ordering shirts for a team. The coach pays a one-time fee of $24. The coach also pays $8 for each shirt ordered. Write a function that can be used to find *c*, the total amount the coach pays in dollars when *k* shirts are ordered?

5. Melissa is saving $25 that she earned for washing her mom's car. She earns $10 every week for doing chores, which she also saves. Write a function that can be used to find *t*, the amount of money Melissa will have saved at the end of *n* weeks of doing chores.

6. Frankie bought a new computer. He made an initial payment of $50 to the store, and he will pay $30 each month until the computer is paid off. Write an equation that represents the relationship between *m*, the number monthly payments Frankie has made, and *t*, the total amount that Frankie has paid the store.

**Similar examples**

1. A telecommunications company offers a plan with a $20 monthly service fee and charges $0.05 per minute for phone calls. Which equation represents $y$, the total charges in dollars for making $x$ minutes of phone calls in a month?

2. Sam works as a delivery driver for a company. Each month he receives a fixed salary, and he also earns additional money based on the number of deliveries he completes. In September, Sam made 120 deliveries and earned a total of $4,500.00. In October, Sam made 150 deliveries and earned a total of $5,250.00. Write a function that can be used to find $y$, the total amount Sam is paid in a month if he completes $x$ deliveries.

3. A swimming pool is being drained. Currently, it contains 5000 gallons of water. The water level decreases at a constant rate of 100 gallons per day. Write a function that can be used to find $g$, the total number of gallons of water in the pool after $d$ days.

4. A teacher is purchasing books for a classroom. The teacher pays a one-time fee of $30 for classroom supplies. Additionally, the teacher pays $5 for each book purchased. Write a function that can be used to find $c$, the total amount the teacher pays in dollars when $b$ books are purchased.

5. Tommy receives an allowance of $5 every week for completing his chores, which he saves entirely. Additionally, he saves $15 from his birthday money. Write a function that can be used to find $t$, the amount of money Tommy will have saved at the end of $n$ weeks of doing chores.

6. Jenny purchased a new smartphone. She made an initial payment of $100 to the store, and she will pay $25 each month until the smartphone is paid off. Write an equation that represents the relationship between $m$, the number of monthly payments Jenny has made, and $t$, the total amount that Jenny has paid the store.