

Name: Class:

Find a value using two-variable equations - word problems

1. A car factory manufactures **110** new cars each month. Let **m** represent the number of months and **c** represent the total number of cars produced.
Find the value of **c** when **m=3**.



2. There are 52 weeks in a year. Let **y** represent the number of years and **w** represent the number of weeks.
Find the value of **w** when **y=5**.

3. A jar of lollipops has 3 less red lollipops than blue lollipops. Let **b** represent the number of blue lollipops in the jar and **r** represent the total number of lollipops in the same jar.
Find the value of **b** when there are **15** lollipops in the jar.



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Solve word problems by finding two-variable equations

1. A car factory manufactures **110** new cars each month. Let **m** represent the number of months and **c** represent the total number of cars produced.

Find the value of **c** when **m=3**.

- ▶ In this relationship, **m=3** and denotes the input while **c** denotes the output.

- ▶ So you can find **c** by multiplying **110** by **m**

$$\begin{aligned} c &= 110 \cdot m \\ c &= 110 \cdot 3 \\ c &= 330 \end{aligned}$$

So when $m=3$, $c=330$



2. There are 52 weeks in a year. Let **y** represent the number of years and **w** represent the number of weeks.

Find the value of **w** when **y=5**.

- ▶ In this relationship, **y=5** and denotes the input while **w** denotes the output.

- ▶ So you can find **w** by multiplying **52** by **y**

$$\begin{aligned} w &= 52 \cdot y \\ w &= 52 \cdot 5 \\ w &= 260 \end{aligned}$$

So when $y=5$, $w=260$

3. A jar of lollipops has 3 less red lollipops than blue lollipops. Let **b** represent the number of blue lollipops in the jar and **r** represent the total number of lollipops in the same jar.

Find the value of **b** when there are **15** lollipops in the jar.

- ▶ In this relationship, **r = 15** and denotes the input while **b** denotes the output.

- ▶ So you can find **b** by subtracting **3** from **r**.

$$\begin{aligned} b &= r - 3 \\ b &= 15 - 3 \\ b &= 12 \end{aligned}$$

So when $r = 15$, $b = 12$

