



Dependent & independent variables

GRADE 6 MATH

Name _____

Date _____

Work through the sheet in order. Name both variables before writing the equation; final answers go in the boxes. One skill: **dependent and independent variables**.

WORKED EXAMPLE

Ask: **which one do I choose?** (independent) and **which one responds?** (dependent). Write the dependent variable alone on the left. Tickets at \$5 each: you choose t tickets, cost responds $\rightarrow c = 5t$. A table of x and y shows the same relationship, one row at a time.

1. Tickets cost \$5 each. Write an equation for cost c and number of tickets t , then find c when $t = 9$.

FLUENCY

Show your thinking

Answer

2. Complete the table for $y = 4x$ at $x = 1, 2, 3, 4$.

FLUENCY

Show your thinking

Answer

3. A train travels 60 km/h. Write an equation for distance d and time t , then find d at $t = 4$.

FLUENCY

Show your thinking

Answer

4. Each brick weighs 2.5 kg. Write an equation for total weight w and number of bricks b , then find w when $b = 6$.

APPLICATION

Show your thinking

Answer

5. A plumber charges \$15 to visit plus \$3 per hour. Write an equation for cost c and hours h , then find c when $h = 5$.

APPLICATION

Show your thinking

Answer

6. For $y = 7x$, find y when $x = 8$, and say which variable is dependent.

APPLICATION

Show your thinking

Answer

7. A table shows $x = 1, 2, 3$ and $y = 6, 12, 18$. Write the equation, and explain how the table told you the rule.

REASONING

Show your thinking

Answer

8. Eggs come 9 to a tray. Maya writes $t = 9e$, where e is the number of eggs and t the number of trays. Explain her error and write the correct equation.

REASONING

Show your thinking

Answer

9. For $y = x + 10$, find y when $x = 15$. Explain why this relationship is different from $y = 10x$.

REASONING

Show your thinking

Answer