

# Input or Result?

*Find what changes and what causes the change.*

**GRADE 6 • TEKS 6.6.A**

**6.6.A** "identify independent and dependent quantities from tables and graphs;"

NAME \_\_\_\_\_

DATE \_\_\_\_\_

## SPOT THE QUANTITIES

The independent quantity is the input, or the quantity you choose or start with. The dependent quantity changes because of the independent quantity.

## WORKED EXAMPLE

Table: Practice sessions: 11, 13, 17.  
Points earned: 22, 26, 34. Name the independent and dependent quantities.

1. Start with the number of practice sessions.
2. Points earned changes when sessions change.
3. Independent: practice sessions.  
Dependent: points earned.

**Answer: Independent: practice sessions;  
dependent: points earned.**

## PRACTICE 5 problems

- 1** Table: Minutes drawing: 6, 9, 15. Sketches finished: 2, 3, 5. Name the independent and dependent quantities.

**ANSWER** \_\_\_\_\_

- 2** A graph has x-axis number of arcade games played and y-axis tickets won. Name the independent quantity.

**ANSWER** \_\_\_\_\_

- 3** Table: Hours streaming: 4, 7, 10. Data used: 8, 14, 20 GB. Name the dependent quantity.

**ANSWER** \_\_\_\_\_

- 4** A graph has x-axis minutes exercising and y-axis heartbeats counted. Name the independent and dependent quantities.

**ANSWER** \_\_\_\_\_

- 5** Table: Total cost: \$18, \$12, \$6. Smoothies bought: 3, 2, 1. Which quantity is independent?

**ANSWER** \_\_\_\_\_

## APPLY IT Show your work

- 1** Kai's music app lists songs downloaded and storage space used. Which quantity is independent, and which is dependent?

WORK SPACE

**ANSWER** \_\_\_\_\_

- 2** The art club sells buttons for \$5 each. A table lists buttons sold and total money collected. Which quantity is independent, and which is dependent?

WORK SPACE

**ANSWER** \_\_\_\_\_

## CHALLENGE One step up

A plant graph has x-axis days since planting and y-axis plant height. Lee says plant height is independent because it is on the y-axis. Is Lee correct? Explain.

WORK SPACE AND ANSWER

## PART 1 • PRACTICE

| # | PROBLEM                                                                                                             | ANSWER                                                                 |
|---|---------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| 1 | Table: Minutes drawing: 6, 9, 15. Sketches finished: 2, 3, 5. Name the independent and dependent quantities.        | <b>Independent: minutes drawing; dependent: sketches finished.</b>     |
| 2 | A graph has x-axis number of arcade games played and y-axis tickets won. Name the independent quantity.             | <b>Number of arcade games played.</b>                                  |
| 3 | Table: Hours streaming: 4, 7, 10. Data used: 8, 14, 20 GB. Name the dependent quantity.                             | <b>Data used.</b>                                                      |
| 4 | A graph has x-axis minutes exercising and y-axis heartbeats counted. Name the independent and dependent quantities. | <b>Independent: minutes exercising; dependent: heartbeats counted.</b> |
| 5 | Table: Total cost: \$18, \$12, \$6. Smoothies bought: 3, 2, 1. Which quantity is independent?                       | <b>Smoothies bought.</b>                                               |

## PART 2 • APPLY IT

1. **Independent: songs downloaded; dependent: storage space used.** Kai chooses how many songs to download. The storage space used changes with the downloads.
2. **Independent: buttons sold; dependent: total money collected.** The number of buttons sold is the input. Total money collected changes as the number sold changes.

## CHALLENGE

**No. Days since planting is independent, and plant height is dependent because it changes as days pass.**

Accept equivalent wording such as input or output. For graphs, accept the full axis label or a clear shortened quantity name.