

# Direct Proportion

Name:

Date:

**INQUIRY**

**The more hours you work, the more you earn. Is the relationship always perfectly proportional?**

Discuss with your partner. Write your initial ideas below:

## Key Vocabulary

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Term	Definition
<b>Direct proportion</b>	As one increases, the other increases at the same rate.
<b>Constant of proportionality</b>	The multiplier between the two quantities ( $k$ ).

## Part A — Identifying

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1. Which are directly proportional? (a) distance and time at constant speed (b) age and height (c) number of items and total cost (d) temperature and day of the week. [2 marks]

## Part B — Calculating

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2.  $y$  is directly proportional to  $x$ . When  $x=4$ ,  $y=20$ . Find  $y$  when  $x=7$ . [3 marks]

Show your working:

**3.** Exchange rate: 1 euro = 7.8 yuan. Convert: (a) 50 euro to yuan (b) 234 yuan to euro. [2 marks]

Show your working:

**4.** A German car travels 450 km on 30 litres. How far on 42 litres? [2 marks]

Show your working: