

Grade 7 ratio and proportion test

NAME	DATE	SCORE / 10
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Answer each question. Show your work.

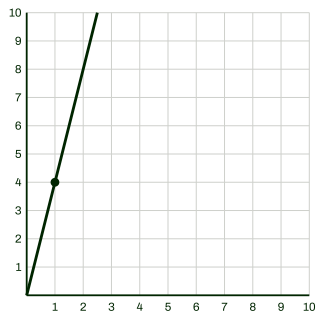
1 Solve for x: $56 / 24 = 42 / x$	2 $\frac{3}{2} = \frac{___}{4}$
3 The number of people in a town changed from 3,110 to 2,177. What is the percent decrease in the number of people?	4 A plant was 75 cm tall. Then the plant's height grew by 12%. How tall is the plant now, in centimetres?
5 On a plan, a field is 9 cm long. The real field is 27 m long. What is the scale of the plan? ☐ 3 cm to 1 m ☐ 1 cm to 3 m ☐ 1 cm to 18 m ☐ 1 cm to 27 m	6 Emma puts \$2,500 in a savings account that pays 3% simple interest each year. What is the balance in the account after 4 years, in dollars?
7 A store buys a pair of shoes for \$43 and marks the price up by 40%. What price does the store sell the pair of shoes for, in dollars?	8 Each pencil costs \$0.45. Write an equation for the cost y, in dollars, of x pencils.
9 In 5, 7 and 9 hours, a bike goes 15, 21 and 27 kilometres. What is the constant of proportionality, in kilometres per hour? ☐ 10 kilometres per hour ☐ 6 kilometres per hour ☐ 3 kilometres per hour ☐ 3 hours per kilometre	10 A floor plan has a scale of 1 cm to 5 m. A room on the plan is 9 cm by 7 cm. The plan is redrawn with a scale of 1 cm to 2 m. What are the length and width of the room on the new plan? ☐ 22.5 cm by 17.5 cm ☐ 3.6 cm by 2.8 cm ☐ 22.5 cm by 7 cm ☐ 45 cm by 35 cm

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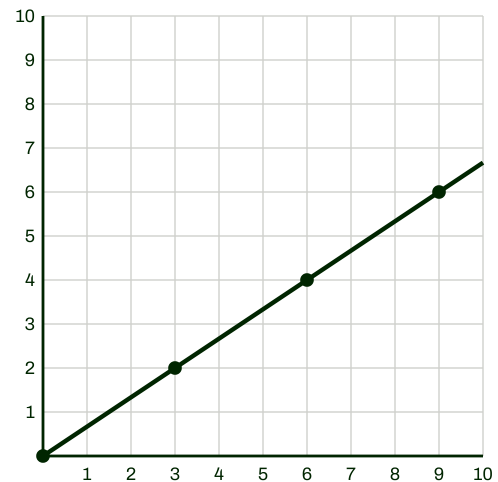
NAME	DATE	SCORE / 2
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Answer each question. Show your work.

- 11** The graph below shows y proportional to x . What is the constant of proportionality?



- 12** The graph below shows pairs of values of x and y . Does the graph show a proportional relationship, and why?



- ☐ No: the points do not lie on a straight line
☐ No: the points lie on a straight line that misses $(0, 0)$
☐ Yes: the points lie on a straight line through $(0, 0)$

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1	18	2	6	3	30
4	84	5	1 cm to 3 m	6	2800
7	60.20	8	$y = 0.45x$	9	3 kilometres per hour
10	22.5 cm by 17.5 cm	11	4	12	Yes: the points lie on a straight line through (0, 0)