Grade 7 ratio and proportion test

NAME	DATE	SCORE / 10

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 centimeters?

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 miles. What is the constant of proportionality, in miles per hour?

◯ 10 miles per hour ◯ 6 miles per hour ◯ 3 miles per hour ◯ 3 hours per mile

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?

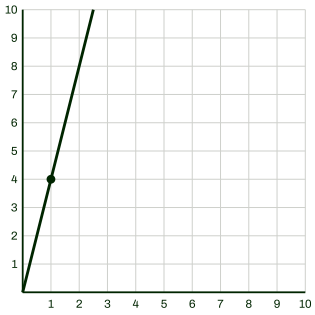
◯ 22.5 cm by 17.5 cm ◯ 3.6 cm by 2.8 cm ◯ 22.5 cm by 7 cm ◯ 45 cm by 35 cm

Grade 7 ratio and proportion test

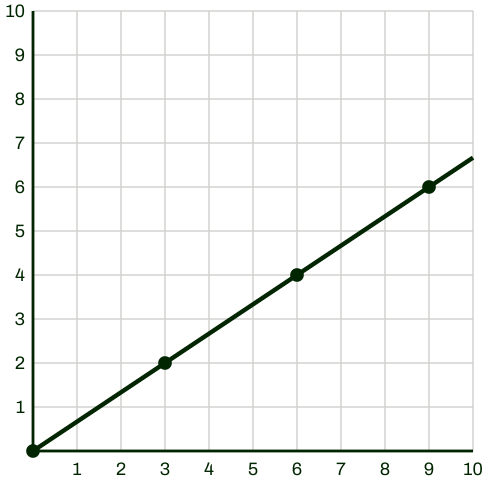
NAME	DATE	SCORE / 2

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 miles per hour
10	22.5 cm by 17.5 cm	11	4	12	Yes: the points lie on a straight line through (0, 0)