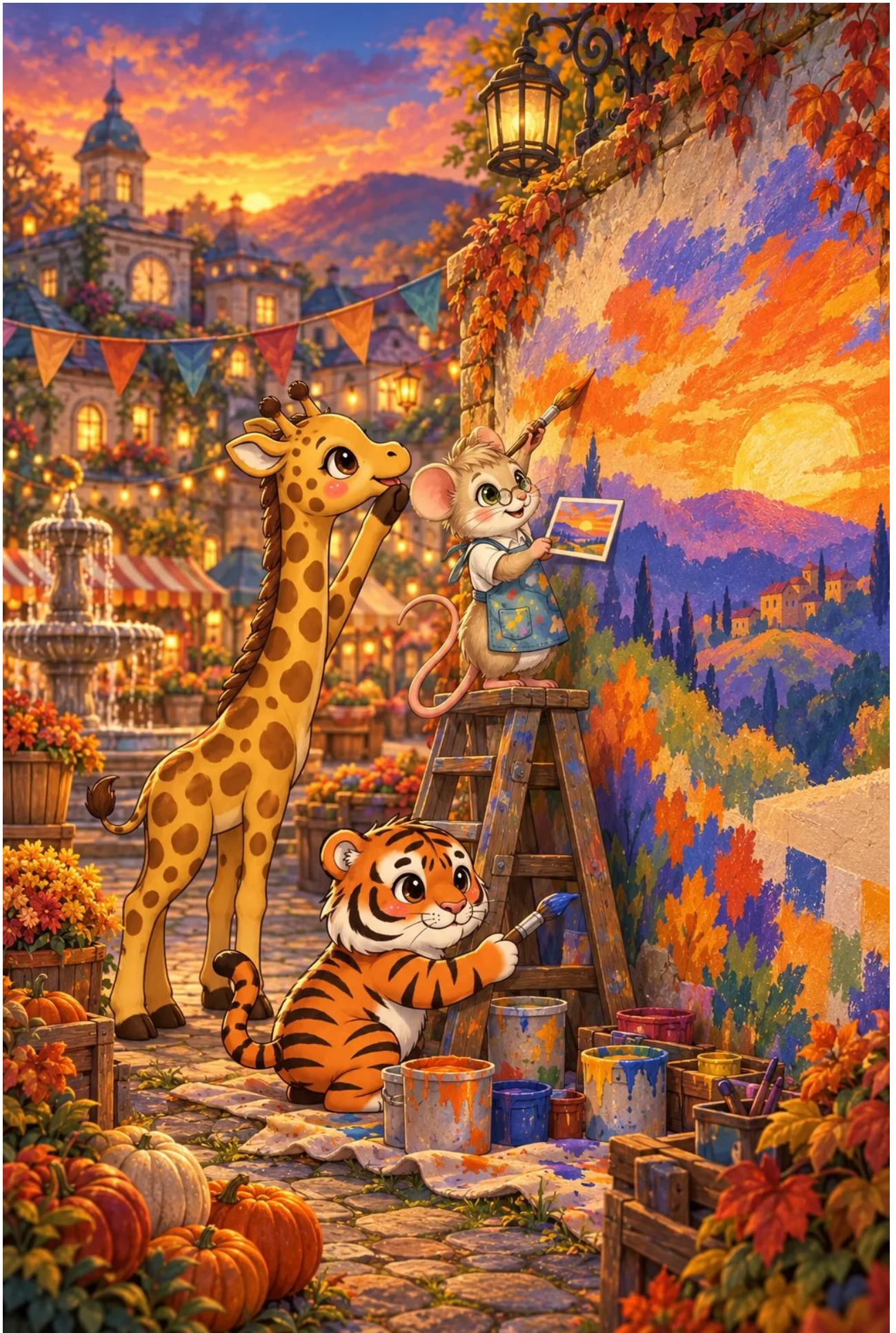


















# Questions for Vincent Van Mouse and the Mural in Proportion

Read the story together first. Use one question at each page, then the question at the end. Answers are below the dotted line: fold them under or cover them while reading.

## Page 1 • A Sketch the Size of a Postcard

The sketch is 8 cm tall. If every 1 cm becomes 25 cm, how tall will the mural be, in centimetres?

Choices: 33 · 175 · 200 · 225

## Page 2 • Sunset Orange

Red and yellow are mixed in the ratio 2:3. There are 8 pots of red. How many pots of yellow are needed?

Choices: 9 · 12 · 16 · 24

## Page 3 • The Wrong Shade?

Simplify 10:15 so that the first number is 2. What is the second number?

Choices: 3 · 5 · 7 · 13

## Page 4 • High Squares and Low Squares

45 squares are shared in the ratio 4:5. How many squares does Sail-Affe paint?

Choices: 9 · 20 · 25 · 36

## Page 5 • Racing the Rain Clouds

At the same rate, how many minutes will 7 squares take?

Choices: 16 · 21 · 28 · 84

## Page 6 • Gold for the Final Touch

30 ml is shared in the ratio 1:2:3. How many millilitres does Stripe-Scout get?

Choices: 3 · 5 · 10 · 15

## Page 7 • The Unveiling

The mural is 200 cm tall. At a scale of 1 to 25, how tall is the postcard picture, in centimetres?

Choices: 8 · 175 · 225 · 5000

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### Answers (fold under before reading)

Page 1: 200. Scaling multiplies every length by the same factor:  $8 \times 25 = 200$  cm. Adding 25 instead ( $8 + 25 = 33$ ) would squash the picture out of proportion.

Page 2: 12. 2 parts are 8 pots, so 1 part is 4 pots. Yellow is 3 parts:  $3 \times 4 = 12$ . Keeping the same difference instead ( $8 + 1 = 9$ ) would change the colour.

Page 3: 3. Divide both parts by 5:  $10 \div 5 = 2$  and  $15 \div 5 = 3$ , so 10:15 is 2:3, the very same orange. Taking 8 away from both parts (2:7) does not keep the ratio.

Page 4: 20.  $4 + 5 = 9$  parts altogether.  $45 \div 9 = 5$  squares in each part. Sail-Affe paints 4 parts:  $4 \times 5 = 20$ .

Page 5: 28. Find the time for one square first:  $12 \div 3 = 4$  minutes. Then  $7 \times 4 = 28$  minutes. Adding 4 more minutes ( $12 + 4 = 16$ ) treats a proportion as an addition.

Page 6: 15.  $1 + 2 + 3 = 6$  parts.  $30 \div 6 = 5$  ml in each part. Stripe-Scout has 3 parts:  $3 \times 5 = 15$  ml.

Page 7: 8. To scale down, divide every length by 25:  $200 \div 25 = 8$  cm. That is exactly the size of Vincent's first sketch.