



Scale drawings

GRADE 7 MATH

Name _____

Date _____

Do this on your own — the worked example shows what to do. State the scale factor; give units. One skill: **scale drawings**.

WORKED EXAMPLE

Lengths multiply by k . Areas multiply by k^2 . Drawing to real life multiplies; real life to drawing divides. Check area answers by scaling both dimensions and multiplying.

1. A fence is 7 cm on a 1 : 30 drawing. How long is it really, in centimetres?

FLUENCY

Show your thinking

Answer

2. A park is 15 cm on a 1 : 400 drawing. How long is it in metres?

APPLICATION

Show your thinking

Answer

3. Every length of a shape is multiplied by 3. By what factor is the area multiplied?

FLUENCY

Show your thinking

Answer

4. Every length is multiplied by 10. By what factor is the area multiplied?

APPLICATION

Show your thinking

Answer

5. A rectangle is 5 cm by 9 cm. Every length is multiplied by 2. Find the new area.

APPLICATION

Show your thinking

Answer

6. Check question 5 by scaling each dimension and multiplying.

APPLICATION

Show your thinking

Answer

7. The area of a scaled copy is 9 times the original. By what factor were the lengths multiplied? Explain.

REASONING

Show your thinking

Answer

8. A photo is enlarged so its area is 36 times bigger. By what factor did the lengths grow? Explain how you found it.

REASONING

Show your thinking

Answer