Reasoning and Problem Solving
Using Scale Factors

Developing
1a. **6cm**
2a. **No because the perimeter of the original shape is 16cm. The new perimeter would be 32cm.**
3a. **A: 3cm, B: 2cm, C: 5cm**

Expected
4a. **10.6cm**
5a. **Yes because the perimeter of the original shape is 14.6cm. 14.6 x 4 = 58.4cm**
6a. **A: 2.2cm, B: 4.1cm, C: 3.2cm**

Greater Depth
7a. **12.08cm**
8a. **Yes because the sides increase to 16.1cm and 7cm. 16.1cm x 7cm = 112.7cm²**
9a. **A: 4cm, B: 2cm, C: 3cm**

Developing
1b. **12cm**
2b. **Yes because the perimeter of the original shape is 18cm. The new perimeter would be 54cm.**
3b. **A: 4cm, B: 2cm, C: 3cm**

Expected
4b. **12.4cm**
5b. **No because the perimeter of the original shape is 12cm. 12 x 4 = 48cm not 60cm. That is a scale factor of 5.**
6b. **A: 2.2cm, B: 4.3cm, C: 3.1cm**

Greater Depth
7b. **11.32cm**
8b. **No because the sides increase to 10.6cm and 7.5cm. 10.6 x 7.5 = 79.5cm² not 50.88cm².**
9b. **A: 4cm, B: 3cm, C: 2cm**