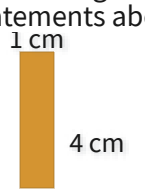
Perimeter Area and Volume Changes in Scale

Name:

#1

Look at this rectangle: if the side lengths are reduced fourfold, then which of the following statements about its area will be true?

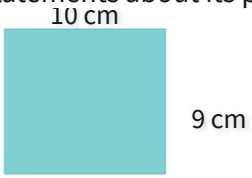


- The new area will be $\frac{1}{16}$ of the old area.
- The new area will be $\frac{597}{10000}$ of the old area.
- The new area will be 9 times of the old area.
- The new area will be 11 times of the old area.

Show your work

#2

Look at this rectangle: if the both dimensions are quadrupled, then which of the following statements about its perimeter will be true?

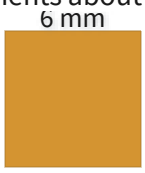


- The new perimeter will be 8 times of the old perimeter.
- The new perimeter will be 4 times of the old perimeter.
- The new perimeter will be $\frac{5}{8}$ of the old perimeter.
- The new perimeter will be 7 times of the old perimeter.

Show your work

#3

Look at this square: if the side lengths are tripled, then which of the following statements about its area will be true?

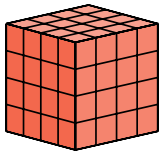


- The new area will be $\frac{5}{6}$ of the old area.
- The new area will be 9 times of the old area.
- The new area will be 5 times of the old area.
- The new area will be 14 times of the old area.

Show your work

#4

Look at this cube: if the side lengths are tripled, then which of the following statements about its surface area will be true?

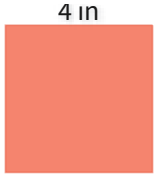


- The new surface area will be 4 times of the old surface area.
- The new surface area will be 3 times of the old surface area.
- The new surface area will be $\frac{9}{14}$ of the old surface area.
- The new surface area will be 9 times of the old surface area.

Show your work

#5

Look at this square: if the side lengths are doubled, then which of the following statements about its perimeter will be true?

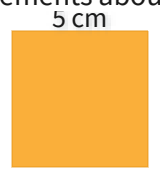


- The new perimeter will be 2 times of the old perimeter.
- The new perimeter will be $\frac{4}{5}$ of the old perimeter.
- The new perimeter will be 4 times of the old perimeter.
- The new perimeter will be 7 times of the old perimeter.

Show your work

#6

Look at this square: if the side lengths are doubled, then which of the following statements about its area will be true?



- The new area will be 4 times of the old area.
- The new area will be 9 times of the old area.
- The new area will be 14 times of the old area.
- The new area will be $\frac{8}{11}$ of the old area.

Show your work

#7

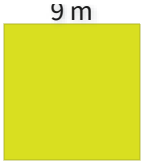
Look at this square: if the side lengths are reduced fourfold, then which of the following statements about its area will be true?

- The new area will be 8 times of the old area.
- The new area will be $\frac{1}{16}$ of the old area.
- The new area will be $\frac{293}{5000}$ of the old area.
- The new area will be 6 times of the old area.

Show your work

#8

Look at this square: if the side lengths are quadrupled, then which of the following statements about its area will be true?

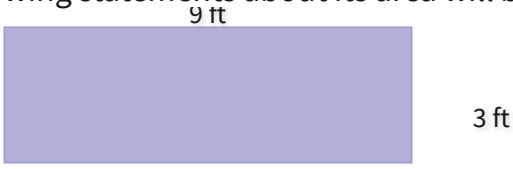


- The new area will be 5 times of the old area.
- The new area will be 4 times of the old area.
- The new area will be 16 times of the old area.
- The new area will be $\frac{1}{4}$ of the old area.

Show your work

#9

Look at this rectangle: if the base is quadrupled, then which of the following statements about its area will be true?



- The new area will be 8 times of the old area.
- The new area will be 4 times of the old area.
- The new area will be 5 times of the old area.
- The new area will be $\frac{2}{3}$ of the old area.

Show your work

#10

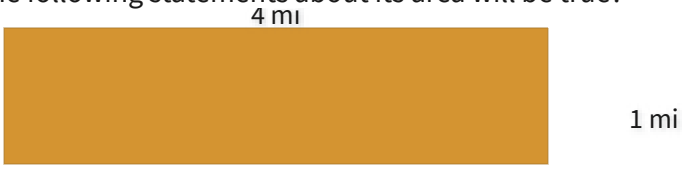
Look at this square: if the side lengths are tripled, then which of the following statements about its area will be true?

- The new area will be $\frac{2}{13}$ of the old area.
- The new area will be 8 times of the old area.
- The new area will be 9 times of the old area.
- The new area will be 12 times of the old area.

Show your work

#11

Look at this rectangle: if the base is reduced fourfold, then which of the following statements about its area will be true?



- The new area will be 6 times of the old area.
- The new area will be 5 times of the old area.
- The new area will be $\frac{1}{4}$ of the old area.
- The new area will be $\frac{21}{100}$ of the old area.

Show your work

#12

Look at this rectangle: if the both dimensions are quadrupled, then which of the following statements about its perimeter will be true?

- The new perimeter will be 10 times of the old perimeter.
- The new perimeter will be 4 times of the old perimeter.
- The new perimeter will be $\frac{2}{3}$ of the old perimeter.
- The new perimeter will be 7 times of the old perimeter.

Show your work

Question	Answer
#1	choice 1
#2	choice 2
#3	choice 2
#4	choice 4
#5	choice 1
#6	choice 1
#7	choice 2
#8	choice 3
#9	choice 2
#10	choice 3
#11	choice 3
#12	choice 2