

NCSC – Mathematics Lesson 1

Area and Perimeter of Similar Figures:

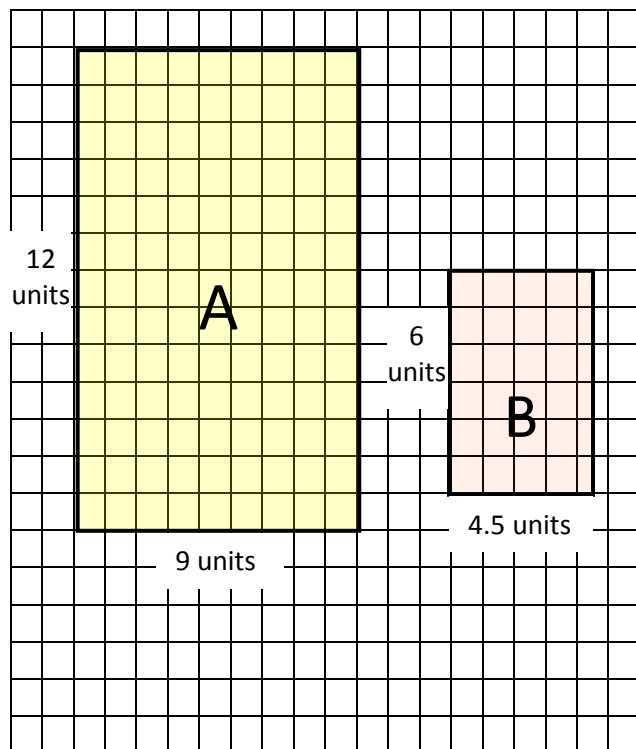


Figure A

$$A = 12 \text{ units} \times 9 \text{ units}$$

$$A = 108 \text{ units}^2$$

$$P = 12 \text{ units} + 12 \text{ units} + 9 \text{ units} + 9 \text{ units}$$

$$P = 42 \text{ units}$$

Figure B

$$A = 6 \text{ units} \times 4.5 \text{ units}$$

$$A = 27 \text{ units}^2$$

$$P = 6 \text{ units} + 6 \text{ units} + 4.5 \text{ units} + 4.5 \text{ units}$$

$$P = 21 \text{ units}$$

Compare Area of figures A and B

$$\frac{AA}{AB} = \frac{108}{27}$$

$$\frac{AA}{AB} = \frac{4}{1}$$

Compare Perimeter of figures A and B

$$\frac{PA}{PB} = \frac{42}{21}$$

$$\frac{PA}{PB} = \frac{2}{1}$$

The student can use manipulatives (next 2 pages) to compare the two figures by laying rectangle B over rectangle A until completely covered to determine how many times bigger area of A is than B. The student can compare perimeter by laying rectangle B over rectangle A to determine how many are needed to create the same length (2), then how many are needed to create the same width (2)

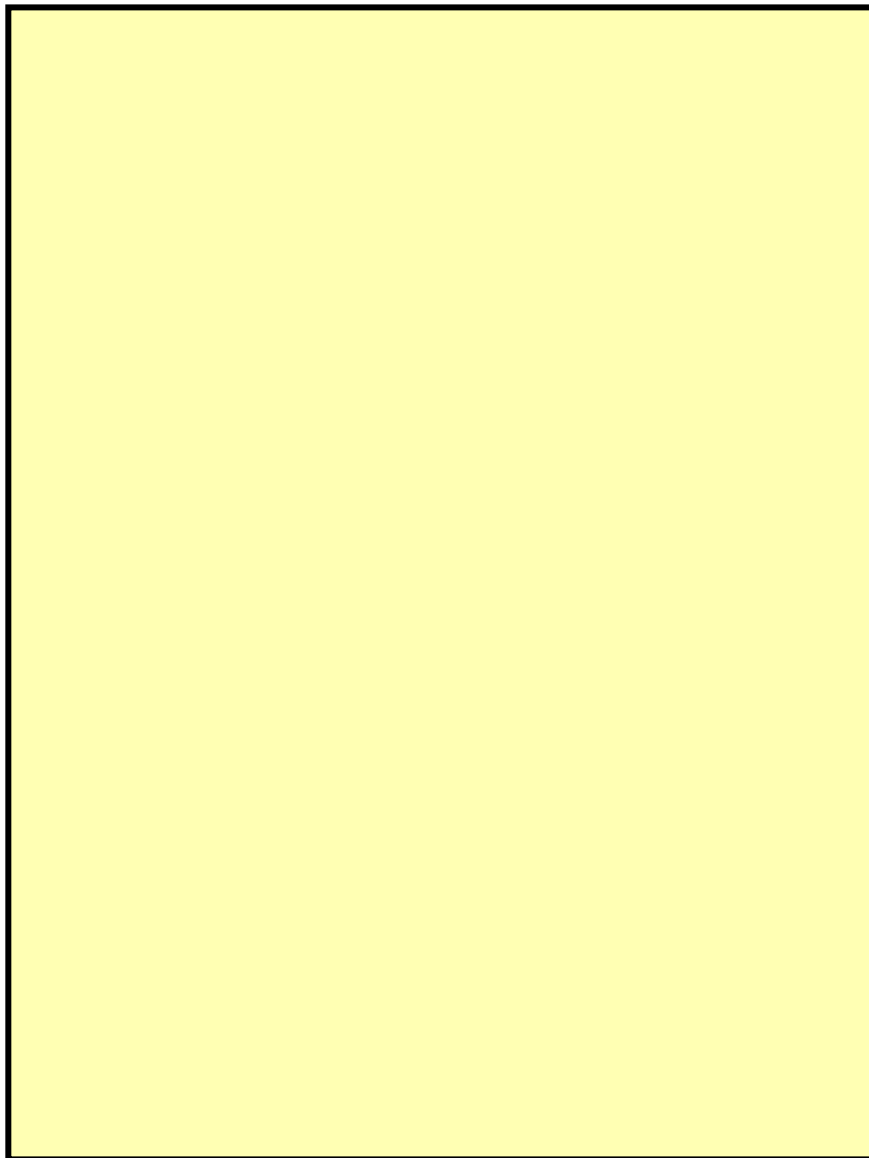
The area of A is 4 times the area of B.

The perimeter of A is 2 times the perimeter of B.

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Tactile representations of similar figures: cut figures out using construction paper, poster board, card board, sand paper, etc. Representations can also be cut out as templates or frames to lay over grid paper or cut out of transparencies to see grid lines.

Rectangle A



12
units

9 units

Rectangle B

