A Fraction Times a Fraction

Achievement Objectives:

Understand operations on fractions, decimals, percentages, and integers.

Specific Learning Outcomes:
Solve multiplication and division problems that involve fractions.

Description of mathematics:
Number Framework Stage 8

Required Resource Materials:
Squared paper.
Scissors

Activity:
Using Materials

Problem: "Maurice decides to plant ¾ of a rectangular field in carrots. Draw two copies of a 4 by 5 rectangle. Put one aside for later and cut out ¾ of the other one.

Next day Maurice realises he does not need all this ¾ area for carrots, so he decides to plant 4/5 of this area in carrots. Draw vertical lines to create fifths and cut out 4/5.

Compare the final cut-out shape with the spare copy of the original field. What fraction is in carrots?" *(Answer: 9 small squares are in carrots of the original 20 small squares. So the fraction is 9/20.)*

Examples: Draw two 4 by 4 squares to work out ¾ of ¾.Draw two 3 by 5 rectangles to work out 4/5 of 2/3.Draw two 3 by 5 rectangles to work out 2/3 of 4/5.

Understanding Number Properties:

Choose a size of rectangle suitable to work out 5/6 of 4/7 and then find the answer. *(Answer: 20/42 or 10/21.)*

Using Number Properties

Problem: "Look at the answers to the examples above. What pattern do you notice?"

Examples: Work out: 7/10 x 9/103/5 x 4/5 8/11 x 3/10 6/7 x 3/100

Understanding Number Properties:

What letters replace the question marks? h/i x j/k = (? x ?) / (? x ?) *(Answer: (h x j)/(i x k).)*