Stage 8

Multiplication & Division Pamphlet

Stage 8

Multiplication & Division Strategies

Use conversion between fractions & decimals

$0.75 \times 2.4 = \square$

Change one of the decimals into a fraction

$^3/_4 \times 2.4$

Use your fraction strategies to solve

I know that $^1/_2$ of 2.4 is **1.2**, which means $^1/_4$ is **0.6** so $^3/_4$ is $1.2 + 0.6 = 1.8$

so $0.75 \times 2.4 = 1.8$

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Multiplication & Divisions Strategies

Using place value

$0.15 \times 4.6 = \square$

Expand the numbers into $^1/_{10s}$ & $^1/_{100s}$

$(0.1 \times 4.6) + (0.05 \times 4.6) =$

Now solve and recombine

$0.46 + 0.23 = 0.69$

so $0.15 \times 4.6 = 0.69$

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Multiplication & Division Strategies

Using doubling & halving

$5.6 \div 0.4 = \square$

Double one of the numbers to simplify the equation.

$(5.6 \div 0.8) \times 2 = \square$

I know that $56 \div 8$ is 7, so $5.6 \div 0.8$ is also 7.

But why do I need to multiply by 2?

When you divided 5.6 by a number twice as big, you ended up with an answer that was half as big, so to compensate for this you will need to double the answer.

so $5.6 \div 0.4 = 14$ (7×2)

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Multiplication & Division Strategies

Using commutativity

$32 \times 0.125 = \square$

Write the equation as ...

$0.125 \times 32 = \square$

Now I will use my fraction/decimal knowledge

I know that 0.125 is $^1/_8$, and $^1/_8 \times 8 = 1$

So I will rewrite the question by changing 32 into a multiplication equation (8×4)

My new equation is $0.125 \times 8 \times 4$

If $0.125 \times 8 = 1$, then $0.125 \times 8 \times 4 = 4$

Stage 8

Multiplication & Division Strategies

Multiplying numerators & denominators

$\frac{2}{3} \times \frac{2}{5} =$ or $\frac{2}{3}$ of 

Multiply the numerators together, then multiple the denominators together

$\frac{2 \times 2}{3 \times 5} = \frac{4}{15}$

What it looks like