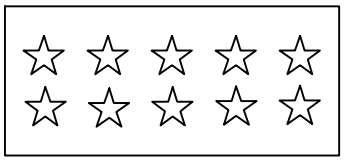
4th Graders
STRAND 5: MODELS FOR OPERATIONS
Objectives 5A

Relate multiplication and division facts to rectangular arrays and pictures (factors of 2, 5, 10).

Which number fact goes with this picture?



O 2 + 5

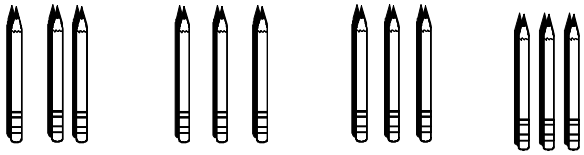
O 2 × 5

O 10 - 5

O 2 + 4

5+5 would not have been a correct answer even if it had been one of the choices because this is a picture of a multiplication array, not an addition picture.

Sue shared 12 pencils with her 4 friends. Which fact could be used to find the number of pencils each friend received?



O 12 ÷ 4

O 4 x 12

O 4 + 12

O 12 - 4

Melanie had 20 beads. She put 5 beads on each string. Which number sentence should be used to find out how many strings had beads on them?

O $20 + 5 =$
O $20 - 5 =$
O $20 \times 5 =$
O $20 \div 5 =$

Write a story problem that can be solved using the number sentence $25 + 30 = \square$.

JOINING MODEL OF ADDITION: Maria has 25 houses. (She is really into real estate!) Last month in a fit of boredom, she bought 30 more houses. How many houses does she now own? (And is she aware that there is help for compulsive shopping?)

COMBINED MODEL OF ADDITION: Maria has 25 Colonial houses and 30 raised ranches. How many houses does Maria have? (and who cleans all these houses? Not Maria – she's too busy buying more houses.)

Write a story problem that can be solved using the number sentence 82 – 36 = ☐ .

TAKE-AWAY MODEL OF SUBTRACTION: Michele had 82 exotic cars in every make, model, and color you could imagine. She gave 36 Lamborghinis from her collection to Maria (so she could drive around in comfort looking for more houses to buy). How many cars did Michele keep for herself?

COMPARISON MODEL OF SUBTRACTION: Diane has 82 Masseratis. Michele has only (ONLY?) 36 Masseratis in her collection. How many more Masseratis does Diane have? (And who's going to pay for all the insurance on these cars, I'd like to know! Plus you'd practically have to keep a mechanic on a retainer fee to keep them all running smoothly in this wretched New England weather.)

MISSING ADDEND MODEL OF SUB: Maria has 82 single car garages. She has 36 Aston Martins to put into some of the garages. How many more cars does she need to fill the rest of the garages?

Write a story problem that matches a given addition number sentence

Story problems involving basic multiplication facts (5 x 6) could also be included.

REPEATED ADDITION MODEL OF MULTIPLICATION: While cleaning out her closet, Emily found 15 old purses. Inside each purse were 6 magic lamps. How many magic lamps did Emily find? (and how many wishes will she be getting?)

ARRAY MODEL OF MULTIPLICATION: Emily decided to have her closet floor retiled. Her closet is 15 feet long and 6 feet wide. How many one-foot square tiles will Emily need to retile the closet floor? (That's a lot of closet to clean. No wonder she kept putting it off.)

CARTESIAN PRODUCT MODEL OF MULTIPLICATION: Emily decided to wish for some new clothes. Suddenly, just like that, right out of thin air, she had 15 tops and 6 skirts hanging in her clean, retiled closet. How many outfits can Emily now make with her new clothes?