HOTDOGS

About three-act tasks

The three-act mathematics task format was developed by Dan Meyer.

It is a whole group mathematics task consisting of three distinct parts: an engaging and perplexing Act One, an information and solution seeking Act Two, and a solution discussion and solution revealing Act Three.

Three act tasks provide an authentic context to use and develop math understanding. They create situations where students engage in mathematical modelling, build relational understanding among concepts and develop ideas about the justification of thinking and answers.

Facilitating the three acts

Act One

Play Act One video. Act One shows a pile of hotdogs.

The question is 'How many hotdogs were prepared for the party?'

Ask the students to guess, guiding them to use number sense by asking for a guess they know is too high and one that is too low. Record guesses.

How many hot dogs were prepared for the party?
WRITE DOWN A GUESS

Act Two

Play Act Two video. Act Two shows the packages of hotdogs and hotdog buns that were purchased. The question is 'How does this information help?'
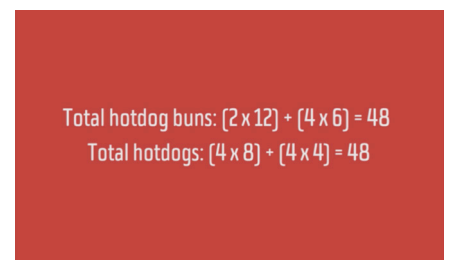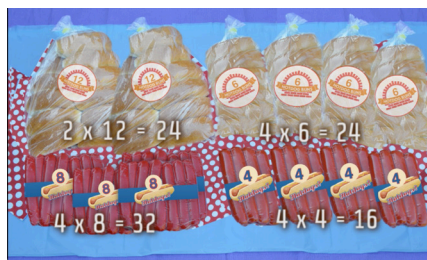
Ensure students are clear that more than one of each package was purchased and that there were no extra hotdog buns or hotdogs.

Help students to be clear when they are explaining their thinking verbally. Encourage students to listen to each other and build on each others' thinking.

Here are what the packages that we bought looked like.
We bought more than one of each.
There were no extra hot dog buns or hotdogs.
How does this information help?
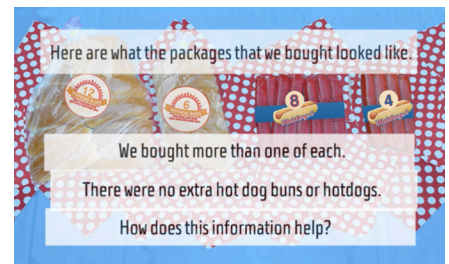
Act Three

Play Act Three video. This is where the answer is shown. Compare different methods students used and promote discussion about which is the most efficient and why.

$2 \times 12 = 24$ $4 \times 6 = 24$
$4 \times 8 = 32$ $4 \times 4 = 16$

Total hotdog buns: $(2 \times 12) + (4 \times 6) = 48$
Total hotdogs: $(4 \times 8) + (4 \times 4) = 48$

The Sequel

Play the sequel video to this three-act task. This provides an extension to the first problem. The students are presented with a visual where they are challenged to find how many packages of each would be needed to make a pile of hotdogs as close to 100 as possible.

Essentially this problem is asking the students to list the common multiples of 8 and 12 and then find the multiple closest to 100.

The answer is 96.

How many packages of each would you need
to make a pile of hot dogs where
the total number was as close to 100 as possible?

Hotdogs

Act One

What is the main question?

Make a guess that you know is too low:

Make a guess that you know is too high:

Act Two

What information are you given?

How does it help?

Act Three

How close were your guesses?

Name _____

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The Sequel

Your workspace: