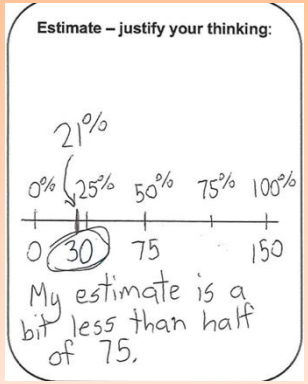
Grade 7 SNAP Operations

- **Estimate – Justify your thinking**

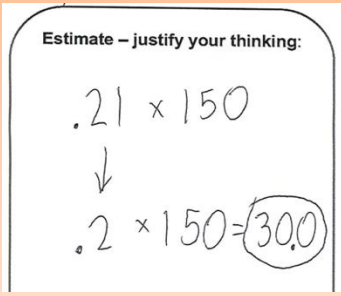
Operations Rubric: Proficient

- Estimation/mental math strategies and justification are reasonable

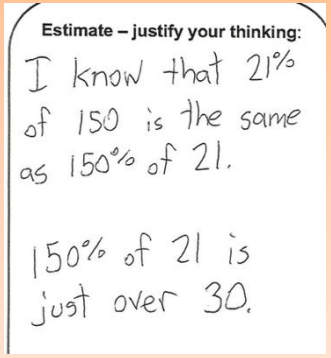
21% of 150



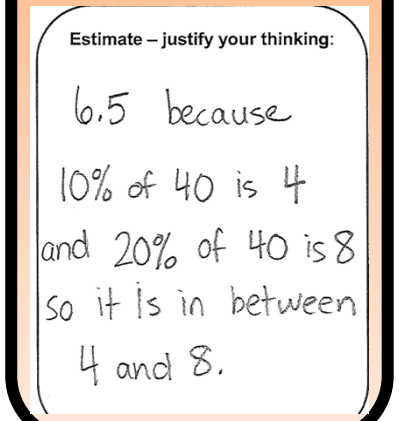
21% of 150



21% of 150



16% of 40



Note:

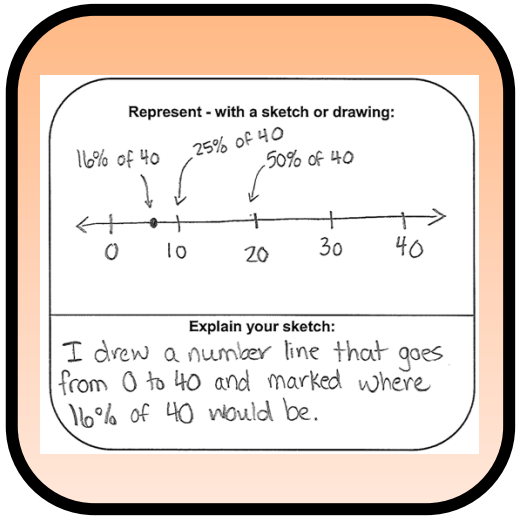
- **An estimate alone without any justification is not proficient, even if the number is reasonable.**
- **Estimation can be a challenging skill because it requires strategy selection, rounding, and mental math skills. You can find instructional ideas and a list of effective. estimation strategies to teach students in Reasoning and Analyzing Resources.**

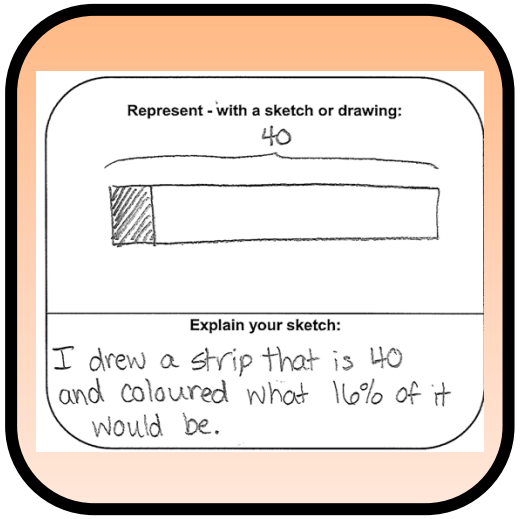
Goal:

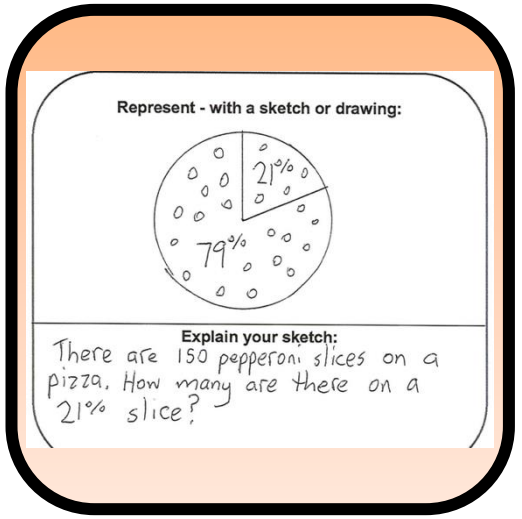
- **Manipulate the factor(s) through rounding or finding "friendly numbers" and then multiplying OR**
- **Use logical reasoning with or without a visual model to find an estimate.**
- **Explain/justify your strategy in words or by clearly showing your strategy with numbers and/or other visual models.**

Grade 7 SNAP Operations

- **Represent with a sketch or drawing**
- **Explain your sketch**







Operations Rubric: Proficient

- Uses grade appropriate strategies to correctly solve the problem and show understanding

Notes:

- **Students do not need to show the solution in their drawings, but they are welcome to add it once they have done their calculation**
- **It is worthwhile to model this section with a number line representation to give students a clear, simple strategy to use, but other strategies can still be used to demonstrate understanding.**

Goal:

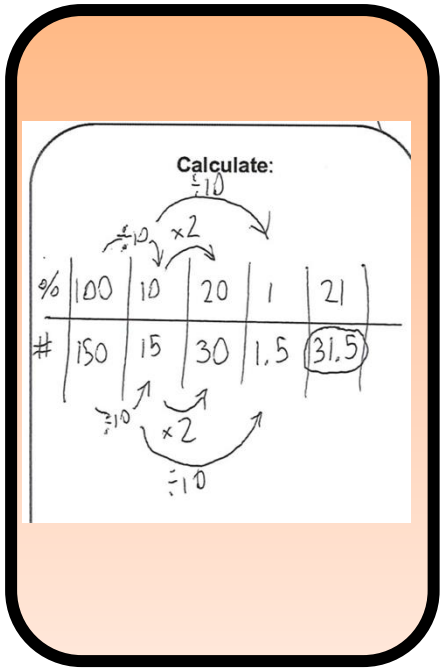
- **Use a drawing to demonstrate an understanding of percentage of a number**

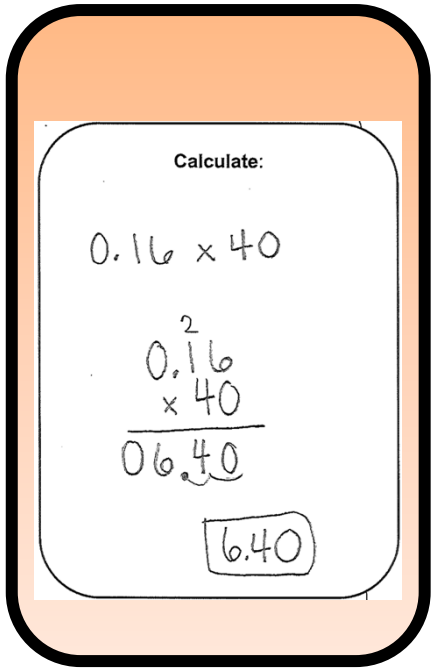
Grade 7 SNAP Operations

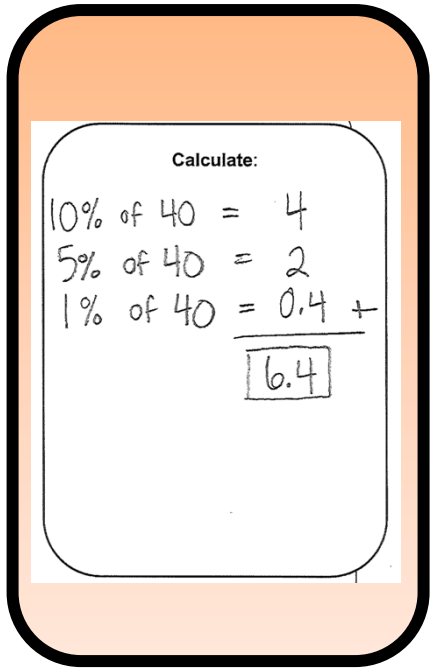
- **Calculate**

Operations Rubric: Proficient

- Uses grade appropriate strategies to correctly solve the problem and show understanding







Notes:

- **The standard algorithm is one possible strategy, but there are others that are equally acceptable (e.g. ratio tables, number lines, clearly justified logical reasoning, etc.)**
- **An "answer" alone without work is not proficient**

Goal:

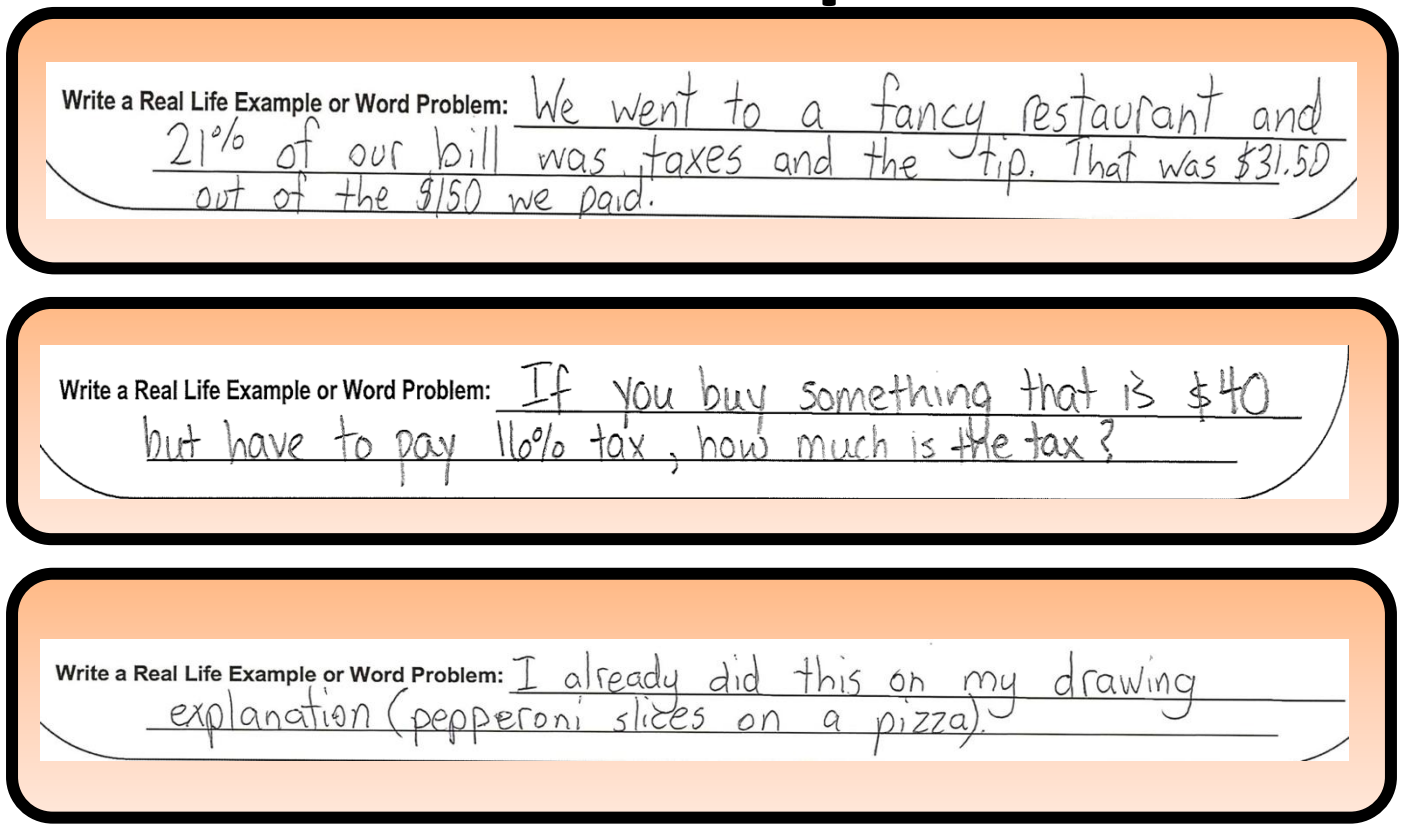
- **Select an appropriate strategy, carry out the steps, and clearly indicate the solution.**

Grade 7 SNAP Operations

- **Write a real-life example or word problem**

Operations Rubric: Proficient

- Real life example and connections to mathematical concepts are evident
- The example shows a clear connection to the operation



Notes:

- **It is very helpful to spend time in class brainstorming and recording real-life examples of percentage of a number. It is very important to students' understanding of this challenging concept.**
- **The bottom example was included as a reminder that we need to look at the page as a whole to determine proficiency, and not just one specific box. If a student already gave a clear real-life example in another section, we score this section as proficient.**

Goal:

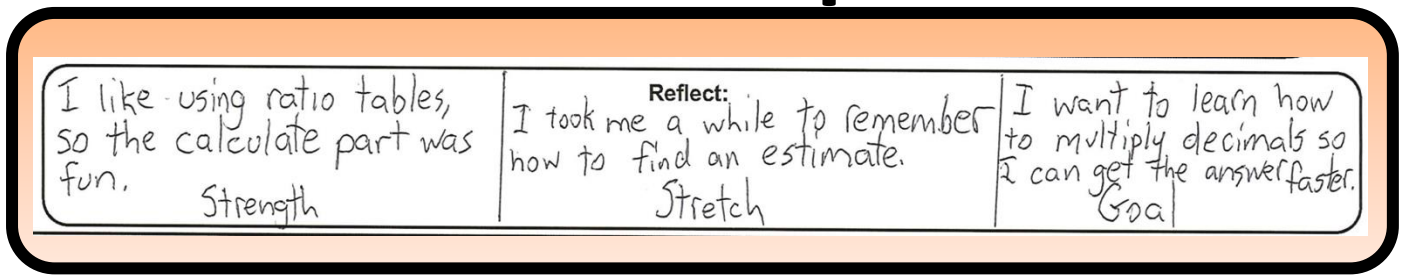
- **Demonstrate an understanding of percentage of a number using a real-life situation.**

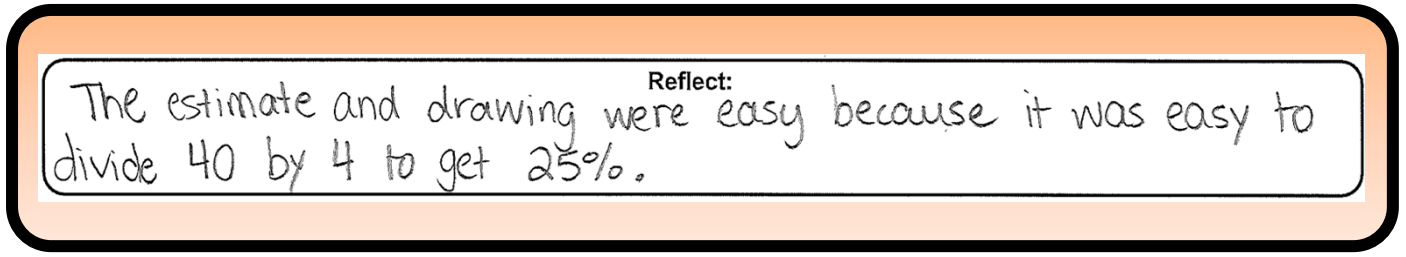
Grade 7 SNAP Operations

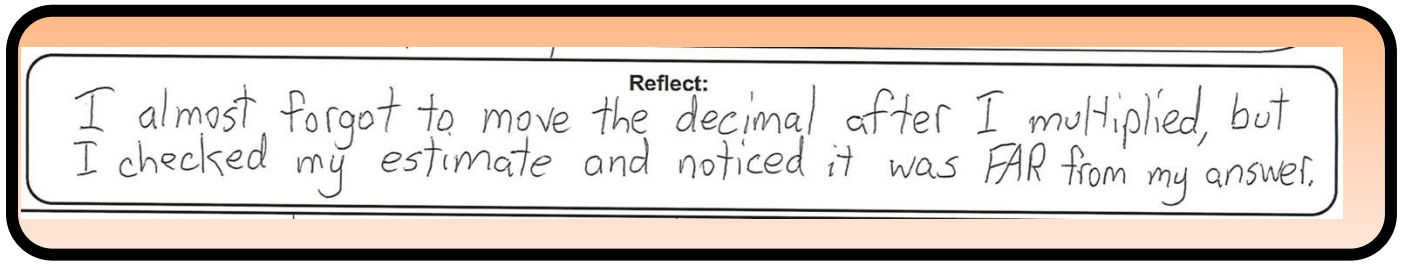
- **Reflect**

Number Sense Rubric: Proficient

- With sentence frames and structure, can proficiently reflect on their learning







Notes:

- **It's important to model and teach effective reflection skills, or students will often default to "It was all easy" or "It was all hard"**
- **Clear expectations like, "Give me one strength, one stretch, and one goal" will lead to more insightful, reflective responses**
- **You can find reflection sentence stems in Connecting and Reflecting Resources**

Goal:

- **Identify and articulate strengths, stretches, and/or goals related to the content and competencies explored in the SNAP**

Chilliwack School District

Operations Fraction, Decimal, Percent SNAP

Name: Teacher created

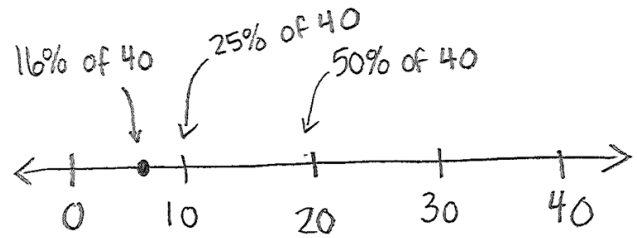
Date: _____

Operation: 16% of 40

Estimate – justify your thinking:

8 because I know 25% of 40 is 10 so it has to be a bit less than 10.

Represent - with a sketch or drawing:



Explain your sketch:

I drew a number line that goes from 0 to 40 and marked where 16% of 40 would be.

Calculate:

10% of 40 = 4

5% of 40 = 2

1% of 40 = 0.4 +

6.4

Write a Real Life Example or Word Problem: If you buy something that is $40 but have to pay 16% tax, how much is the tax?

Reflect:

The estimate and drawing were easy because it was easy to divide 40 by 4 to get 25%.

Communicating & Representing	Understanding & Solving	Connecting & Reflecting	Reasoning & Analyzing
1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
Entire assessment	Entire assessment except reflection	Real-life & reflection	Estimate

Chilliwack School District

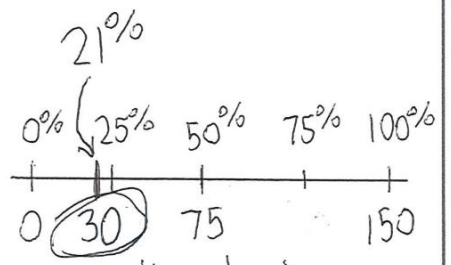
Operations SNAP

Name: _____

Date: _____

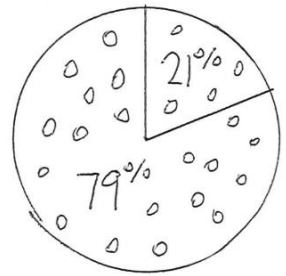
Operation: 21% of 150

Estimate – justify your thinking:



My estimate is a bit less than half of 75.

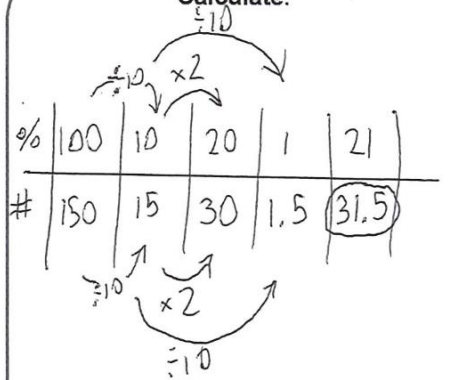
Represent - with a sketch or drawing:



Explain your sketch:

There are 150 pepperoni slices on a pizza. How many are there on a 21% slice?

Calculate:



%	100	10	20	1	21
#	150	15	30	1.5	31.5

Write a Real Life Example or Word Problem: I already did this on my drawing explanation (pepperoni slices on a pizza).

Reflect:

I like using ratio tables, so the calculate part was fun. Strength

I took me a while to remember how to find an estimate. Stretch

I want to learn how to multiply decimals so I can get the answer faster. Goal

Communicating & Representing	Understanding & Solving	Connecting & Reflecting	Reasoning & Analyzing
Entire Assessment	Represent & Calculate	Real-life & reflection	Estimate
Emerging Developing **Proficient** Extending	Emerging Developing **Proficient** Extending	Emerging Developing **Proficient** Extending	Emerging Developing **Proficient** Extending

Chilliwack School District

Operations SNAP

Name: _____

Date: _____

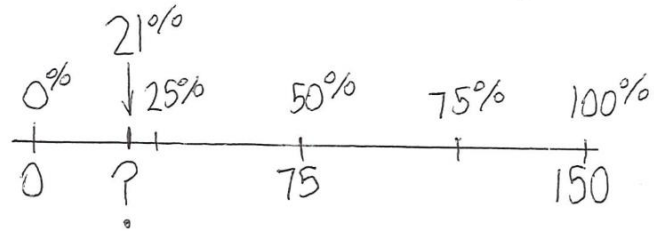
Operation: 21% of 150

Estimate – justify your thinking:

I know that 21% of 150 is the same as 150% of 21.

150% of 21 is just over 30.

Represent - with a sketch or drawing:



Explain your sketch:

I drew the percentages and the missing answer on a number line.

Calculate:

$$\begin{array}{r} {}^{1} \\ 150 \\ \times \quad .21 \\ \hline 150 \\ 3000 \\ \hline 31.50 \end{array}$$

Write a Real Life Example or Word Problem: We went to a fancy restaurant and 21% of our bill was taxes and the tip. That was $31.50 out of the $150 we paid.

Reflect:

I almost forgot to move the decimal after I multiplied, but I checked my estimate and noticed it was FAR from my answer.

Communicating & Representing	Understanding & Solving	Connecting & Reflecting	Reasoning & Analyzing
Entire Assessment	Represent & Calculate	Real-life & reflection	Estimate
Emerging Developing **Proficient** Extending	Emerging Developing **Proficient** Extending	Emerging Developing **Proficient** Extending	Emerging Developing **Proficient** Extending

Chilliwack School District

Operations Fraction, Decimal, Percent SNAP

Name: Teacher Created

Date:

Operation: 16% of 40

Estimate – justify your thinking:

6.5 because

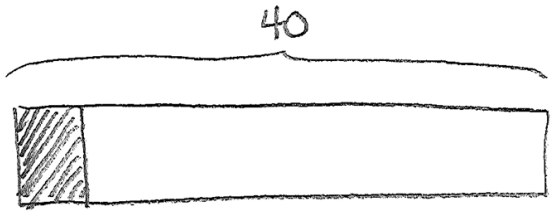
10% of 40 is 4

and 20% of 40 is 8

so it is in between

4 and 8.

Represent - with a sketch or drawing:



Explain your sketch:

I drew a strip that is 40 and coloured what 16% of it would be.

Calculate:

0.16×40

$$\begin{array}{r} {}^{2} \\ 0.16 \\ \times\ 40 \\ \hline 06.40 \end{array}$$

6.40

Write a Real Life Example or Word Problem: If 16% of the trees in the forest died, how many trees would die if there were 40 trees.

Reflect:

I couldn't remember where to put the decimal in the answer but my estimate helped me.

Communicating & Representing	Understanding & Solving	Connecting & Reflecting	Reasoning & Analyzing
1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4
Entire assessment	Entire assessment except reflection	Real-life & reflection	Estimate