

MATH SKETCH NOTES

REVIEW: MULTIPLY MIXED NUMBERS (18)

AREA
MODEL
REVIEW

$$3\frac{1}{4} \times 2\frac{2}{3}$$

A garden is $3\frac{1}{4}$ meters long and $2\frac{2}{3}$ meters wide. What is the area of the garden?

$$\begin{array}{c} 6 + \frac{6}{3} + \frac{2}{4} + \frac{2}{2} \\ 6 + 2 + \frac{6}{12} + \frac{2}{2} = 8\frac{8}{12} = 8\frac{2}{3} \text{ meters}^2 \end{array}$$



FACTORING

BOX METHOD

Use the distributive property of multiplication with a "factor box."

$$\begin{array}{cc} 3 & + & \frac{1}{4} \\ \hline 3 \times 2 & 2 \times \frac{1}{4} \\ = 6 & = \frac{2}{4} \\ + & + \\ 3 \times \frac{2}{3} & \frac{1}{4} \times \frac{2}{3} \\ = 2 & = \frac{2}{12} \end{array}$$

$$\begin{array}{c} 6 + \frac{6}{3} + \frac{2}{4} + \frac{2}{2} \\ 6 + 2 + \frac{6}{12} + \frac{2}{2} \\ \hline \text{simplify} \\ = 8\frac{8}{12} = 8\frac{2}{3} \text{ meters}^2 \end{array}$$

STANDARD ALGORITHM

① Convert mixed numbers into improper fractions.

$$\frac{(4 \times 3) + 1}{4} \times \frac{(3 \times 2) + 2}{3}$$

② Check if you can cross simplify.

$$\frac{12 + 1}{4} \times \frac{6 + 2}{3}$$

③ Multiply straight across the fractions.

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④ Simplify and/or convert to a mixed/whole #.

$$\frac{13}{4} \times \frac{8}{3} = \frac{26}{3} = 8\frac{2}{3}$$

$$4\frac{3}{8} \times 3\frac{1}{5}$$

PRACTICE

$$5\frac{1}{4} \times 2\frac{2}{3}$$

$$\frac{7}{8} \times \frac{2}{5} = \frac{14}{40} = \frac{7}{20}$$

$$\frac{3}{21} \times \frac{9}{18} = \frac{27}{378} = \frac{1}{14}$$

GRADE 6

STEP-BY-STEP POWERPOINT

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STANDARD ALGORITHM

$$\frac{(4 \times 3) + 1}{4} \times \frac{(3 \times 2) + 2}{3}$$

$$\frac{12 + 1}{4} \times \frac{6 + 2}{3}$$

$$\frac{13}{4} \times \frac{8}{3} = \frac{26}{3} = 8\frac{2}{3}$$

$$\begin{array}{r} 3 \times 2 = 6 \\ 3 \times \frac{1}{4} = \frac{3}{4} \\ \frac{1}{4} \times 2 = \frac{2}{4} \\ \frac{1}{4} \times \frac{2}{3} = \frac{2}{12} \end{array}$$

across the fractions
Simplify and/or
convert to a
mixed/whole #

$$4\frac{1}{4} \times 3\frac{1}{3}$$

PRACTICE

$$5\frac{1}{2} \times 2\frac{1}{3}$$

$$\frac{7}{8} \times \frac{2}{8} = \frac{14}{64} = \frac{7}{32}$$

$$\frac{3}{4} \times \frac{9}{2} = \frac{27}{8} = 3\frac{3}{8}$$

simplify
 $= 8\frac{2}{3} = 8\frac{1}{1.5}$ meters

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MacBook Pro

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$$\begin{aligned} &6 + \frac{1}{4} + \frac{2}{3} + \frac{2}{3} \\ &6 + 2 + \frac{1}{2} + \frac{2}{3} = 8\frac{7}{6} = 8\frac{2}{3} \text{ meters}^2 \end{aligned}$$

FACTORIZING

BOX METHOD

Use the distributive property

STANDARD ALGORITHM

- Convert mixed numbers into improper fractions.
- Check if you can

$$\frac{(4 \times 3) + 1}{4} \times \frac{(3 \times 2) + 2}{3} =$$

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FACTORIZING

BOX METHOD

Use the distributive property

STANDARD ALGORITHM

2 SIZES: STANDARD US 8.5 × 11 & COMPOSITION NOTEBOOK



$$\begin{aligned} &6 + 2 + \frac{1}{2} + \frac{2}{3} \\ &= 8\frac{7}{6} = 8\frac{2}{3} \text{ meters}^2 \end{aligned}$$

$$\frac{22}{8} \times \frac{20}{8} = \frac{11}{4} \times \frac{5}{2} = \frac{55}{8} = 6\frac{7}{8}$$

$$\frac{24}{2} \times \frac{20}{2} = 12 \times 10 = 120$$

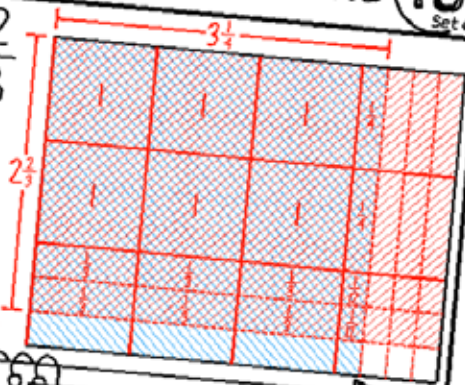
$$= 8\frac{2}{3} = 8\frac{2}{3} \text{ meters}^2$$

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$$\begin{array}{r} 6 + \frac{1}{4} + \frac{2}{4} + \frac{2}{4} \\ 6 + 2 + \frac{1}{2} + \frac{2}{2} \end{array} \xrightarrow{\text{simplify}} 8\frac{8}{4} = 8\frac{2}{1} \text{ meters}^2$$

FACTORIZING
BOX METHOD

Use the distributive prop of multiplication a "factor box."

	3	+	$\frac{1}{4}$	
2	$3 \times 2 = 6$	$\oplus$	$2 \times \frac{1}{4} = \frac{2}{4} = \frac{1}{2}$	
+	$3 \times \frac{1}{4} = \frac{3}{4}$	$\oplus$	$\frac{1}{4} \times \frac{2}{3} = \frac{2}{12} = \frac{1}{6}$	
$\frac{2}{3}$	$= 2$	$\oplus$	$= \frac{3}{6} = \frac{1}{2}$	

$$\begin{array}{r} 6 + \frac{1}{4} + \frac{2}{4} + \frac{2}{4} \\ 6 + 2 + \frac{1}{2} + \frac{2}{2} \end{array} \xrightarrow{\text{simplify}} 8\frac{8}{4} = 8\frac{2}{1} \text{ meters}^2$$

STANDARD ALGORITHM

1 Convert mixed numbers to improper fractions.

DETAILED ANSWER KEY

convert to a mixed/whole #.

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PRACTICE

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MATH SKETCH NOTES

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These 6th-grade math sketch notes (AKA doodle pages) are a powerful learning and teaching tool. They cover essential math concepts and procedures for students in a visually appealing way. You can use this resource to supplement any math curriculum, and they are perfect for previewing/pre-teaching or reviewing/reinforcing.

These sketch pages are like mini anchor charts that your students actively create and can be referred to in the future.

WHAT'S INCLUDED:

- Blank student note page
(two sizes: 8.5 x 11 & composition notebook size for INBs)
- Detailed answer key
- Step-by-step PowerPoint

GUIDED NOTE-TAKING

Guiding your students through the note-taking process is so easy and requires almost zero preparation!

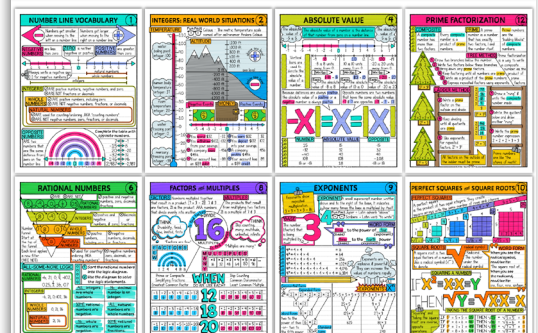
1. PowerPoint: Each sketch note page comes with a step-by-step PowerPoint that you can use to guide your students as they complete their notes.
2. Document Camera: Use a document camera to project a blank copy of the notes. Use the answer key provided to complete the note page in front of your students.

WHY SKETCH?

Sketch notes present your students with a meaningful and engaging activity they will love. Doodle note-taking activates verbal and visual modalities to capture concepts. The whole brain is absorbed in hearing, synthesizing, and retaining ideas. This high level of engagement helps students retain the content and leaves little room for distraction.

GET THE BUNDLE!!!

SIXTH GRADE MATH GUIDED SKETCH NOTES



GROWING BUNDLE