

Name: Class:

Estimate Products of Fractions, Whole Numbers, and Mixed Numbers

- 1) Estimate the product. Round the first mixed number into the nearest whole and the second mixed number into the nearest hundreds, then multiply.

$$4\frac{2}{3} \times 291\frac{1}{2}$$

- 2) Estimate the product. Round the first fraction into the nearest whole number and the whole number into the nearest ten, then multiply.

$$95\frac{2}{5} \times 255$$

- 3) Estimate the product. Round the whole number into the nearest thousand and the mixed number into the nearest ten, then multiply.

$$2,349 \times 105\frac{2}{3}$$

- 4) Estimate the product. Round the first mixed number into the nearest whole and the second mixed number into the nearest hundreds, then multiply.

$$2\frac{3}{6} \times 310\frac{2}{4}$$

- 5) Estimate the product. Round the first fraction into the nearest whole number and the whole number into the nearest ten, then multiply.

$$67\frac{3}{4} \times 126$$

- 6) Estimate the product. Round the whole number into the nearest thousand and the mixed number into the nearest ten, then multiply.

$$58,34 \times 120\frac{1}{2}$$

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Estimate Products Of Fractions, Whole Numbers, And Mixed Numbers

1. $4\frac{2}{3} \times 291\frac{1}{2}$

Step 1: Convert each mixed number to an improper fraction.

$4\frac{2}{3} \rightarrow \frac{(4 \times 3) + 2}{3} = \frac{14}{3}$

$291\frac{1}{2} \rightarrow \frac{(291 \times 2) + 1}{2} = \frac{583}{2}$

Step 2: Convert each improper fraction to a decimal number.

$\frac{14}{3} = 3 \overline{)14.000}$
 4.666 ← Repeating decimals
 - 12
 - 20
 - 18
 - 20
 - 18
 - 20
 - 18
 - 2
 ← stop

$\frac{583}{2} = 2 \overline{)583.0}$
 291.5
 - 4
 - 18
 - 18
 - 03
 - 2
 - 10
 - 10
 0

Step 3: Now, Round each decimal.

4.666 to the nearest whole number = 5.

291.5 to the nearest hundred = 300.

Step 4: Multiply.

so, $4\frac{2}{3} \times 291\frac{1}{2} \approx 5 \times 300 = \mathbf{1,500}$ Therefore, the product is 1,500.

2. $95\frac{2}{5} \times 255$

\downarrow \downarrow
 95.4 255
 \downarrow \downarrow
 95 260

so, $95\frac{2}{5} \times 255 \approx 95 \times 260 = \mathbf{24,700}$

3. $2,349 \times 105\frac{2}{3}$

\downarrow \downarrow
 2,349 105.666
 \downarrow \downarrow
 2000 110

So, $2,349 \times 105\frac{2}{3} \approx 2000 \times 110 = \mathbf{220,000}$