3.7 Estimate with Fractions
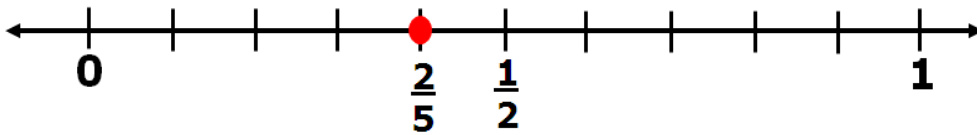
p. 180   12-11-17

$\dfrac{2}{5}$ is closer to $\dfrac{1}{2}$ than to 0.

$$\frac{2}{5} = \frac{4}{10}$$

(2.5)

Benchmarks for Rounding Fractions

Round to 0 if the numerator is much smaller than the denominator.	Round to $\frac{1}{2}$ if the numerator is about half the denominator.	Round to 1 if the numerator is nearly equal to the denominator.
Examples: $\frac{1}{9}, \frac{3}{20}, \frac{2}{11}$	Examples: $\frac{2}{5}, \frac{5}{12}, \frac{7}{13}$	Examples: $\frac{8}{9}, \frac{23}{25}, \frac{97}{100}$

Nov 25-8:56 AM

A blue whale can grow to $33\frac{3}{5}$ m long, while the great white shark may be as long as $4\frac{1}{2}$ m. Estimate how much longer the blue whale is than the great white shark.

$$33\frac{3}{5} \;\; _{oo} (2.5) \qquad 4\frac{1}{2}$$

$$33\frac{1}{2}$$
$$- \;\; 4\frac{1}{2}$$
$$\overline{ 29m}$$

Nov 25-9:31 AM

2

A Cocker Spaniel may grow to weigh about $11\frac{1}{2}$ kilograms while the Chihuahua will not weigh more than $2\frac{7}{8}$ kilograms. Estimate how much more the Cocker Spaniel weighs than the Chihuahua.

Nov 25-9:33 AM

$$\frac{7}{9} - \frac{2}{5}$$

4.5 ∘∘   ∘∘ 2.5

$$1 - \frac{1}{2} = \frac{1}{2}$$

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$$4\frac{5}{9} + 3\frac{1}{8}$$

$$\downarrow$$

$$4\frac{1}{2} + 3 = 7\frac{1}{2}$$

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$$-2\frac{1}{8} + \frac{7}{12}$$

$$-2 + \frac{1}{2} = -1\frac{1}{2}$$

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$$3\frac{2}{9} \cdot 6\frac{5}{6}$$

$$3 \cdot 7 = 21$$

$$3\frac{1}{2} \cdot 7 =$$

Nov 25-9:46 AM

$$11\frac{7}{8} \div 3\frac{1}{3}$$

$$12 \div 3 = 4$$

$$11\frac{1}{8} \div 3\frac{1}{3}$$

$$12 \div 3 = 4$$

Nov 25-9:34 AM

$$13\frac{4}{5} \div 2\frac{1}{4}$$

$$14 \div 2 = 7$$

Nov 25-9:46 AM

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1. The new show arena being built in Franklin County is $150\frac{3}{4}$ feet long and $110\frac{1}{2}$ feet wide. Estimate the difference between the length and width.

Estimate each sum or difference.

2. $\frac{5}{9} + \frac{4}{5}$ $\frac{1}{2} + 1 = 1\frac{1}{2}$ **3.** $\frac{7}{8} - \frac{3}{7}$ $1 - \frac{1}{2} = \frac{1}{2}$

4. $9\frac{3}{4} - 6\frac{1}{5}$ $10 - 6 = 4$

Estimate each product or quotient.

5. $5\frac{7}{8} \bullet 2\frac{1}{6}$ $6 \cdot 2 = 12$

6. $17\frac{5}{6} \div 3\frac{1}{3}$ $18 \div 3 = 6$

Jan 13-8:44 AM