

Name _____

Estimate with 2-Digit Divisors

I Can use compatible numbers to estimate quotients.

MTR You can estimate quotients using compatible numbers that are found by using basic facts and patterns.

$$\begin{aligned} 35 \div 5 &= 7 && \leftarrow \text{basic fact} \\ 350 \div 50 &= 7 \\ 3,500 \div 50 &= 70 \\ 35,000 \div 50 &= 700 \end{aligned}$$

Florida's B.E.S.T.

- Number Sense & Operations 5.NSO.2.2
- Mathematical Thinking & Reasoning MTR.3.1, MTR.4.1, MTR.5.1, MTR.6.1, MTR.7.1



UNLOCK the Problem

The observation deck of a skyscraper in Chicago, Illinois, is 1,353 feet above the ground. Elevators lift visitors to that level in 60 seconds. About how many feet do the elevators travel per second?

Estimate. $1,353 \div 60$

STEP 1

Use two sets of compatible numbers to find two different estimates.

$$\begin{aligned} 1,353 \div 60 \\ \downarrow \\ 1,200 \div 60 \end{aligned}$$

$$\begin{aligned} 1,353 \div 60 \\ \downarrow \\ 1,800 \div 60 \end{aligned}$$

STEP 2

Use patterns and basic facts to help estimate.

$$\begin{aligned} 12 \div 6 &= \underline{\hspace{1cm}} \\ 120 \div 60 &= \underline{\hspace{1cm}} \\ 1,200 \div 60 &= \underline{\hspace{1cm}} \end{aligned}$$

$$\begin{aligned} 18 \div 6 &= \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} \div \underline{\hspace{1cm}} &= \underline{\hspace{1cm}} \\ \underline{\hspace{1cm}} \div \underline{\hspace{1cm}} &= \underline{\hspace{1cm}} \end{aligned}$$

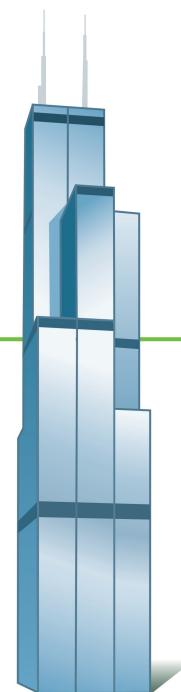
The elevators travel about _____ to _____ feet per second.

The more reasonable estimate is _____ because

_____ is closer to 1,353 than _____ is.

So, the observation deck elevators in the skyscraper travel

about _____ feet per second.



Example Estimate money.

Miriam saved \$650 to spend during her 18-day trip to Chicago. She doesn't want to run out of money before the trip is over, so she plans to spend about the same amount each day. Estimate how much she can spend each day.



Estimate. $18 \overline{) \$650}$

$$\$600 \div \underline{\hspace{2cm}} = \$30 \quad \text{or} \quad \underline{\hspace{2cm}} \div 20 = \$40$$

So, Miriam can spend about _____ to _____ each day.



**Math
Talk**

MTR Engage in discussions on
4.1 mathematical thinking.

Would it be more reasonable to have an estimate or an exact answer for this example? Explain your reasoning.

- MTR** Which estimate do you think is the better one for Miriam to use? Explain your reasoning. _____

Try This! Use compatible numbers.

Find two estimates.

$$52 \overline{)415}$$

Estimate the quotient.

$$38 \overline{) \$2,764}$$

Share and Show

Math Board

Use compatible numbers to find two estimates.

1. $22 \overline{)154}$

2. $68 \overline{)503}$

3. $81 \overline{)7,052}$

$140 \div 20 = \underline{\hspace{2cm}}$

$$160 \div 20 = \underline{\hspace{2cm}}$$

✔ 4. $33 \overline{)291}$

✔ 5. $58 \overline{)2,365}$

6. $19 \overline{)45,312}$