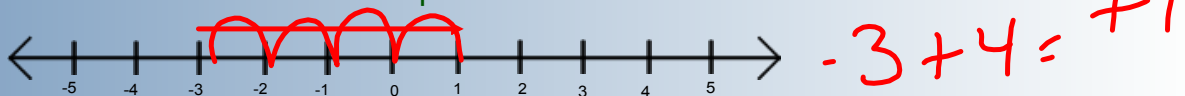


1) What is the range of the following data set:

55, 56, 78, 88, 88, 90, 95, 211 156

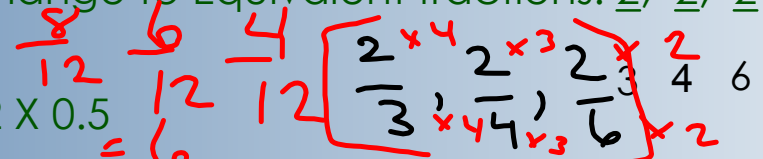
2) What is the addition equation for the number line?



3) Represent the subtraction equation with counters: $(-4) - (+3)$

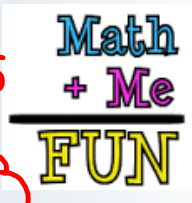
4) $(+6) - (-5)$
+6 + (+5) -7

5) Change to Equivalent fractions: $\frac{2}{3}, \frac{2}{4}, \frac{2}{6}$



6) $12 \times 0.5 = 6$

7) What is the median for the data set : 3, 4, 5, 6, 8, 11



8) What number is divisible by 4? a) 154 b) 260 c) 312

9) Put a digit at the end of this number to make it divisible by 3

10) $1/4$ of 20
5 450
453

Reflect

Describe 3 ways to compare and order fractions and decimals.
 Give an example of when you would use each method.
 Which way do you prefer? Why?

Compare and order
 these fractions:

least $\frac{4}{12}$, $\frac{2}{8}$, $\frac{6}{11}$, $\frac{8}{14}$
 to greatest

$$\frac{4}{12} = 0.\overline{33} \quad \frac{6}{11} = 0.545$$

$$\frac{2}{8} = \underline{0.25} \quad \frac{8}{14} = 0.57$$

0.25, 0. $\overline{33}$, 0.54,
 0.57,

$\frac{2}{8}$, $\frac{4}{12}$, $\frac{6}{11}$, $\frac{8}{14}$

Question #11

3.3

Adding and Subtracting Decimals

Focus Add and subtract decimals to thousandths.

* When we add or subtract decimals, we estimate if we do not need an exact answer. We also estimate to check the answer is reasonable.

$$1. \boxed{0.28} + 0.56$$

$$0.30 = 0.84$$

$$+ 0.60$$

$$= 0.90$$

Estimate

$$2. \boxed{1.19} + 2.22$$

$$1 + 2 = 3$$

$$1.19 + 2.22 = 3.41$$

$$6.8$$

$$- 3.56$$

$$= 3.24$$

$$7 - 4 = 3$$

Shrek 2 was one of the highest-earning movies of 2004. The table shows how much money *Shrek 2* earned in Canada and the United States for the first week it played in theatres. Studios record the earnings in millions of US dollars.

Date	Earnings (US\$ Millions)
Wednesday, May 19	11.786
Thursday, May 20	9.159
Friday, May 21	28.340
Saturday, May 22	44.797
Sunday, May 23	34.901
Monday, May 24	11.512
Tuesday, May 25	8.023

► Estimate first.

Then find the combined earnings on:

- the first 2 days
- Saturday and Sunday
- all 7 days

► Estimate first.

Then find the difference in earnings on:

- Thursday and Friday
- Saturday and Sunday
- Sunday and Monday
- the days with the greatest and the least earnings



$$11.786 + 9.159 = 20.942$$

2 days / 2 + 9 = 21 mil.

$$\text{Sat } 44.797 + 34.901$$

$$\text{Sun } 45 + 35 = 80$$

$$44.797 + 34.901$$

$$= 79.698$$

..

Example

Ephram is a long-distance runner. His practice distances for 5 days last week are shown in the table.

- a) How far did Ephram run in 5 days last week?
- b) How much farther did Ephram run on Tuesday than on Thursday?

A Solution

Day	Distance (km)
Monday	8.85
Tuesday	12.25
Wednesday	10.9
Thursday	9.65
Friday	14.4

A Solution

a) $8.85 + 12.25 + 10.9 + 9.65 + 14.4$

Use front-end estimation.

Add the whole-number part of each decimal.

Think: $8 + 12 + 10 + 9 + 14 = 53$

Ephram ran about 53 km.

a) $8.85 + 12.25 + 10.9 + 9.65 + 14.4$

Add. Write each number with the same number of decimal places.

Use zeros as placeholders: 8.85, 12.25, 10.90, 9.65, 14.40

Record the numbers without the decimal points.

Add as you would whole numbers.

$$\begin{array}{r} 231 \\ 885 \\ 1225 \\ 1090 \\ 965 \\ + 1440 \\ \hline 5605 \end{array}$$

Since the estimate is 53 km, place the decimal point after the first 2 digits; that is, between the 6 and the 0.

Ephram ran 56.05 km.

b) Ephram ran 12.25 km on Tuesday and 9.65 km on Thursday.

Estimate.

$$12.25 - 9.65$$

$$\text{Think: } 12 - 9 = 3$$

Ephram ran about 3 km farther on Tuesday.

Subtract. Align the numbers.

Subtract as you would whole numbers.

$$\begin{array}{r} \overset{11}{1} \overset{12}{2} \cdot \overset{12}{2} \overset{12}{5} \\ - 9.65 \\ \hline 2.60 \end{array}$$

2.6 is close to the estimate 3, so the answer is reasonable.

Ephram ran 2.6 km farther on Tuesday than on Thursday.

Practice

1. Use front-end estimation to estimate each sum or difference.
- a) $2.876 - 0.975$ b) $71.382 + 6.357$
c) $125.12 + 37.84$ d) $9.7 - 1.36$
2. The tallest building in the world is the Taipei 101 in Taiwan. Its height is 0.509 km. The tallest building in North America is the Sears Tower in Chicago, USA. Its height is 0.442 km. What is the difference in the heights of the buildings?
3. Four classes of students from Mackenzie School are planning a field trip. The total cost of the trip is \$1067.50. To date, the classes have raised: \$192.18, \$212.05, \$231.24, \$183.77
- a) How much money have the classes raised so far?
b) How much more money do the classes need to raise in total?
Show your work.



4. **Assessment Focus** A baker wants to make 3 different kinds of chocolate chip cookies. The recipes call for 2.75 kg, 4.4 kg, and 5.55 kg of chocolate chips. The baker has 10.5 kg of chocolate chips.
- a) How many kilograms of chocolate chips does the baker need?
Estimate to check your answer is reasonable.
- b) Does the baker have enough chocolate chips to make the cookies?
How do you know?
- c) The baker wants to follow the recipes exactly.
If your answer to part b is no, how many more kilograms of chocolate chips are needed? If your answer to part b is yes, how many kilograms of chocolate chips will the baker have left over?



- 7.** Find two numbers with a difference of 151.297.
- 9.** A student subtracted 0.373 from 4.81 and got the difference 0.108.
- a) What mistake did the student make?
 - b) What is the correct answer?
- 10.** Two 4-digit numbers were added. Their sum was 3.3.
What could the numbers have been?
Find as many different answers as you can. Show your work.

