

## Warm Up



Add or subtract

$$1) 202.35 + 61.7$$

$$\begin{array}{r} 202.35 \\ + 61.70 \\ \hline 264.05 \end{array}$$

$$2) 14.07 - 2.34$$

$$\begin{array}{r} 14.07 \\ - 2.34 \\ \hline 11.73 \end{array}$$

Use rounding to round the following to the tenths place

$$a) 3.679$$

$$3.7$$

$$b) 11.987$$

$$12.0$$

$$c) 141.438$$

$$141.4$$

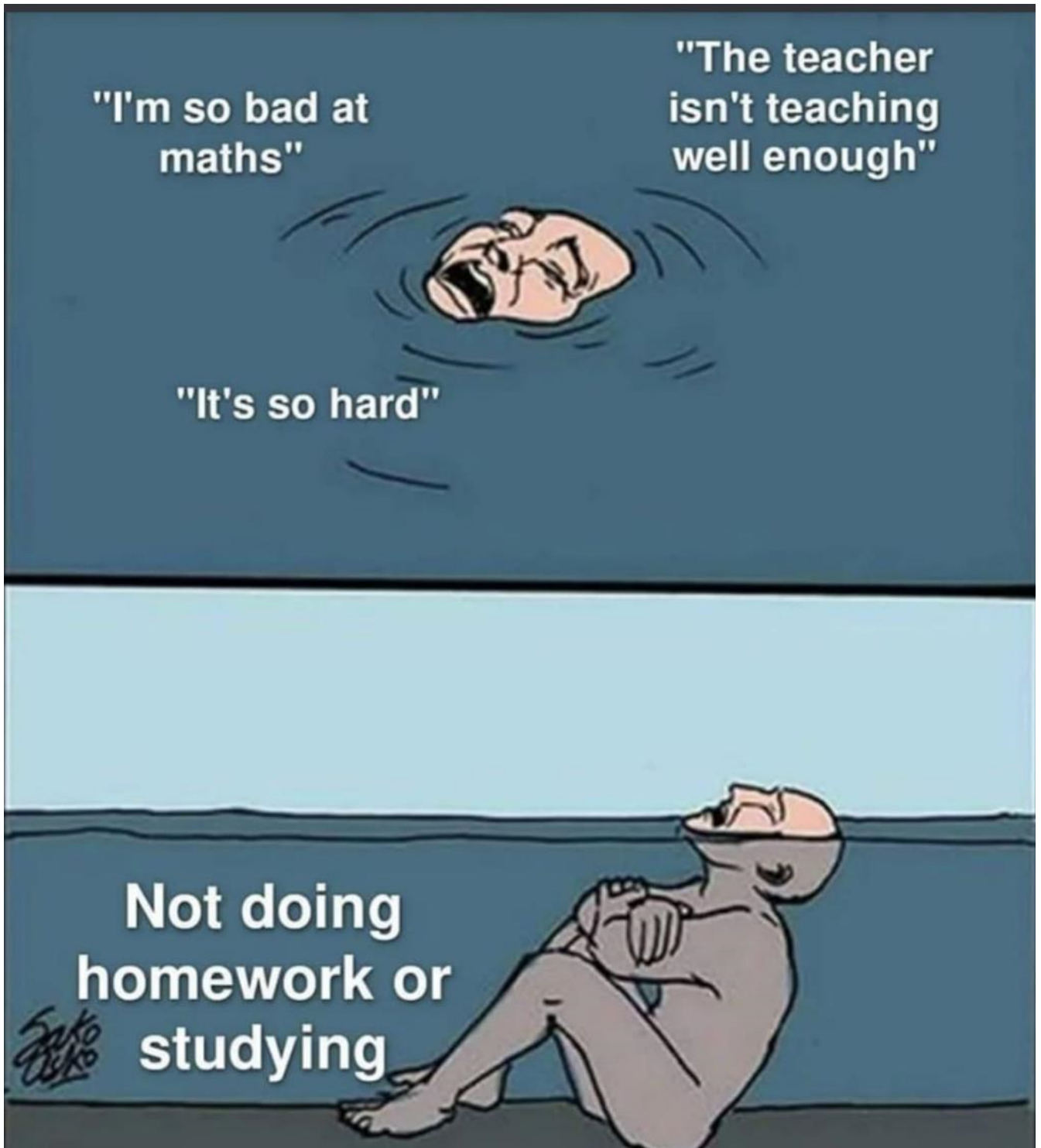
Use front end estimation to add the following

$$14.74 + 15.31 + 6.01$$

$$\approx 14 + 15 + 6$$

$$\approx 35$$

↳ cut off decimal part



## Worksheet

## Solutions

Name: \_\_\_\_\_

Students must show all math work to earn full value.

Only estimate when asked to estimate. (If not then just add or subtract normally showing work)

1. Use front-end estimation to estimate each sum or difference.

a)  $3.478 - 0.846$

$$\begin{array}{r} 3 - 0 \\ 3 \end{array}$$

b)  $79.216 + 5.21$

$$\begin{array}{r} 79 + 5 \\ 84 \end{array}$$

c)  $147.14 + 34.97$

$$\begin{array}{r} 147 \\ + 34 \\ \hline 181 \end{array}$$

d)  $10.9 - 1.47$

$$10 - 1 = 9$$

2) Tim travels the same road to get to his grandmothers house and his friend Karen's house. If the distance from Tim's house to his grandmother's house is 0.743 km and the distance from Karen's house to Tim's house is 0.476 km, then what is the difference in the distance from Karen's house to Tim's Grandmothers **Subtract**

$$\begin{array}{r} 0.743 \\ - 0.476 \\ \hline 0.267 \end{array}$$

The difference in distance is 0.267 km.

3) Four classes of students at Blackville are planning a trip. The total cost is \$2048.50. To date the classes have raised: \$376.15, \$424.05, \$231.24, \$376.75.

a) How much money have the classes raised so far?

$$\begin{array}{r} 376.15 \\ 424.05 \\ + 231.24 \\ + 376.75 \\ \hline 1408.19 \end{array}$$

They raised \$1408.19  
So far.

b) How much more money do the classes need to raise in total?

$$\begin{array}{r} 2048.50 \\ - 1408.19 \\ \hline 640.31 \end{array}$$

They need to raise  
\$640.31 more.

4) A chef is preparing 3 different types of pasta dishes. The recipes require 1.8 kg, 3.25 kg, and 4.6 kg of pasta. The chef has 8.5 kg of pasta available.

a) How many kilograms of pasta does the chef need in total?  
Estimate to check if your answer is reasonable.

$$\begin{array}{l} 1.8 \text{ kg} + 3.25 \text{ kg} + 4.6 \text{ kg} \\ \text{Rounding} \\ \approx 2 + 3 + 5 \\ \approx 10 \text{ kg} \end{array} \quad \left. \begin{array}{l} \text{Front} \\ 1 + 3 + 4 \\ = 8 \text{ kg} \end{array} \right\}$$

b) Does the chef have enough pasta to make all the dishes?

How can you tell?

$$\begin{array}{r} 1.80 \\ 3.25 \\ + 4.60 \\ \hline 9.65 \end{array}$$

He needs 9.65 kg  
but only has 8.5 kg,  
so not enough.

c) If the chef wants to follow the recipes exactly, and your answer to part b is no, how many more kilograms of pasta are needed? If your answer to part b is yes, how much pasta will be left over?

$$\begin{array}{r} 9.65 \\ - 8.50 \\ \hline 1.15 \end{array}$$

The chef needs  
1.15 kg more.

5) Estimate, then calculate, the sum below. Explain how you estimated:

$$35.42 + 7.8 + 2.135$$

**Rounding**

$$\approx 35 + 8 + 2$$

$$\approx 45$$

**Front End**

$$35 + 7 + 2$$

$$\approx 44$$

**Exact**

$$\begin{array}{r} \phantom{0} \phantom{0} \\ 35.420 \\ + 7.800 \\ + 2.135 \\ \hline 45.355 \end{array}$$

6) The Lopez family and the Patel family have similar water usage habits.

The Lopez family does not use water-saving fixtures. Their monthly water bills were: \$87.50, \$92.30, and \$78.45.

The Patel family installed water-saving fixtures in their home. Their monthly water bills were: \$65.40, \$58.75, and \$62.10.

a) How much money did each family spend on water during the three months?

**Lopez**

$$\begin{array}{r} \phantom{0} \phantom{0} \\ 87.50 \\ 92.30 \\ + 78.45 \\ \hline 258.25 \end{array}$$

**Patel**

$$\begin{array}{r} \phantom{0} \phantom{0} \\ 65.40 \\ 58.75 \\ + 62.10 \\ \hline 186.25 \end{array}$$

b) How much more money did the Lopez family spend? Estimate to check your answer is reasonable.

$$\begin{array}{r} \cancel{2}58.25 \\ - 186.25 \\ \hline 72.00 \end{array}$$

The Lopez spent  
\$72 more  
than Patel family

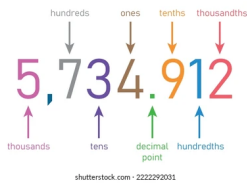
c) What other measures could a family take to reduce their water bills?

Round each number to the nearest tenth.

- |    |             |            |     |      |            |
|----|-------------|------------|-----|------|------------|
| 1) | <u>8.23</u> | <u>8.2</u> | 6)  | 3.46 | <u>3.5</u> |
| 2) | <u>5.24</u> | <u>5.2</u> | 7)  | 5.24 | <u>5.2</u> |
| 3) | <u>9.38</u> | <u>9.4</u> | 8)  | 8.45 | <u>8.5</u> |
| 4) | <u>2.31</u> | <u>2.3</u> | 9)  | 9.69 | <u>9.7</u> |
| 5) | <u>9.46</u> | <u>9.5</u> | 10) | 2.45 | <u>2.5</u> |

Round each decimal to the nearest whole number

- |    |       |          |     |       |           |
|----|-------|----------|-----|-------|-----------|
| 1) | 9.231 | <u>9</u> | 6)  | 1.775 | <u>2</u>  |
| 2) | 3.272 | <u>3</u> | 7)  | 4.859 | <u>5</u>  |
| 3) | 6.318 | <u>6</u> | 8)  | 8.854 | <u>9</u>  |
| 4) | 3.337 | <u>3</u> | 9)  | 9.248 | <u>9</u>  |
| 5) | 3.556 | <u>4</u> | 10) | 9.958 | <u>10</u> |



## Value of a digit

Thousands	Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths

The value of a digit in a decimal number depends on its place. Each place has a specific value. For example:

The **ones place** means whole numbers

The **tenths place** means 1 divided by 10, or 0.1

The **hundredths place** means 1 divided by 100, or 0.01

Digits to the left of the decimal point are whole numbers, while digits to the right are fractions of a whole.

Example) In the number 45.67:

- > The 4 is in the tens place, so its value is 40.
- > The 5 is in the ones place, so its value is 5.
- > The 6 is in the tenths place, so its value is 0.6.
- > The 7 is in the hundredths place, so its value is 0.07.

You Try

Ex1) Express each digit of 3.09 as its value

The 3 → value ⇒ 3

The 0 → value = 0.0

The 9 → value ⇒ 0.09

ex2) In the number 12.478 what is the value of the underlined number.

↓  
0.07



Magnitude means how big or small a number is.



For decimals, it tells us which number is greater or smaller.

### To Compare Decimals

- Compare each place value from left to right

A number with more digits to the left of the decimal is bigger

$$\text{Ex) } 143.7 > 2.789$$

#### Example 1: Comparing 3.25 and 3.5



ones place same value. (3)

tenths place different (0.2 < 0.5)

so  $3.25 < 3.5$

You try

Which is a larger number

- a) 18.2 or 21.6 **Bigger**  
 b) 14.763 or 14.745 **Bigger**  
 c) 9 or 9.01 **Bigger**

Worksheet  
On next 2 pages  
Gr 6 Add/Subtract WS D2



**Grade 6 Add/Subtract Extra Practice****Name:** \_\_\_\_\_**1. Use front-end estimation to estimate each sum or difference.**

- a)
- $8.912 + 1.03 + 0.85$
- b)
- $3.18 + 5.72 + 0.65$
- c)
- $10.5 - 8.3$
- d)
- $45.32 - 4.18$

**2. Add or subtract by showing work. Use estimation to check that the answers are reasonable.**

- a)
- $6.47 + 0.09 + 113.82$
- b)
- $8.92 - 7.81$
- c)
- $3.15 - 2.48$
- d)
- $75.86 + 0.38 + 6.91$

**3. Emily bought 4.5 kg of apples, 2.3 kg of oranges, 3.8 kg of bananas, and 1.95 kg of grapes.**

What was the total mass she had to carry?

**4. The Thompsons can take one of two routes to their campsite.** The highway route is 132.4 km. The scenic route is 157.8 km. How much longer is the scenic route compared to the highway route?

5. During the summer, the average price for a litre of gasoline was \$1.245 in Calgary and \$1.317 in Vancouver.

How much more did a litre of gasoline cost in Vancouver than in Calgary? Write your answer to the nearest cent.

7. A student added  $3.46 + 5.291$  and got the sum 5.637.

- a) What mistake did the student make?  
b) What is the correct answer?

## Attachments

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Grade 7 Ch 3 Extra Practice 3 decimal PDF.pdf



Grade 6 AddSubtract Dec WS D2.docx