Topic 2: Use Models and Strategies to Add and Subtract Decimals
(Lessons 2-1 and 2-3 are NOT Included)

2-2 Estimate Sums and Differences of Decimals (Pages 49 - 52)

-Use Rounding or Compatible Numbers to estimate sums and differences.

Round each addend to the nearest hundred.

$$237.5 \longrightarrow 200$$
$$+\ 345.1 \longrightarrow +\ 300$$
$$500$$

237.5 + 345.1 is about 500.

Round each number to the nearest whole number.

$$22.84 \longrightarrow 23$$
$$-\ 13.97 \longrightarrow -\ 14$$
$$9$$

22.84 − 13.97 is about 9.

2-4 Use Strategies to Add Decimals (Pages 57 - 60)

-Add Decimals to the Hundredths using partial sums.

tens	ones	.	tenths	hundredths
2	1	.	3	9
+ 2	1	.	5	9
		.	1	8
		.	8	
	2	.		
4	0	.		
4	2	.	9	8
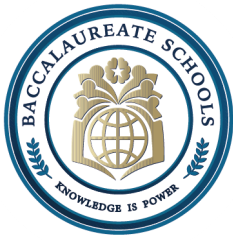
2-5 Use Strategies to Subtract Decimals (Pages 61 - 64)

-Subtract Decimals to the Hundredths using partial differences.

Find $5.92 - 4.37$

$$
\begin{array}{rl}
5.92 & \\
-\ 4.00 & \text{subtract 4 ones} \\
\hline
1.92 & \\
-\ 0.30 & \text{subtract 3 tenths} \\
\hline
1.62 & \\
-\ 0.07 & \text{subtract 7 hundredths} \\
\hline
1.55 & \\
\end{array}
$$

$5.92 - 4.37 = 1.55$

2-6 Problem Solving: Model with Math (Pages 65 - 68)

- Use prior math knowledge and equations or bar diagrams to solve problems

Monica wants to buy all of the art supplies shown on this sign. She has a coupon for $5.50 off the cost of her purchases. What will Monica's total cost be after the discount?

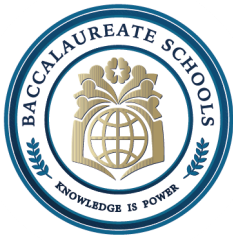| Easel | $59.95 |
Set of paints	$24.95
Smock	$9.75
Canvas boards	$13.50

What do I need to do to solve the problem?

I need to find Monica's cost for the art supplies.

$\$59.95 + \$24.95 + \$9.75 + \$13.50 = \$108.15$

The total cost before the discount is $108.15.

$\$108.15 - \$5.50 = \$102.65$
Monica's cost after the discount is $102.65.

Topic 3: Fluently Multiply Multi-Digit Whole Numbers

3-1 Multiply Greater Numbers by Powers of 10 (Pages 81 to 84)

- Use Place-Value Understandings and Patterns to mentally multiply whole numbers by powers of 10

Instead of using the standard form, write each power of 10 using exponents.

$32 \times 1 = 32 \times 10^0 = 32$
$32 \times 10 = 32 \times 10^1 = 320$
$32 \times 100 = 32 \times 10^2 = 3,200$
$32 \times 1,000 = 32 \times 10^3 = 32,000$
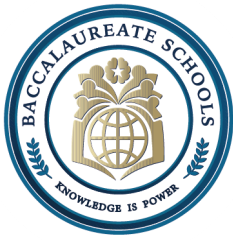$32 \times 10,000 = 32 \times 10^4 = 320,000$

Pattern
The exponent tells how many additional zeros the product will end with.

3-2 Estimate Products (Pages 85 - 88)

-Use Rounding and Compatible Numbers to Estimate Products

$$43 \times 108 = ?$$

less   less   less

$$40 \times 100 = 4,000$$

4,000 is an underestimate.

3-3 Multiply by 1-Digit Numbers (Pages 89 - 92)

- Use Place-value and the standard algorithm to multiply multi-digit numbers by 1-digit numbers.

Find 4×156.

```
  2 2
  1 5 6
×     4
───────
  6 2 4
```

Think:
4×6 ones $= 24$; 24 is 2 tens 4 ones.
4×5 tens $= 20$ tens; 20 tens $+$ 2 tens $=$ 22 tens; 22 tens is 2 hundreds 2 tens.
4×1 hundred $=$ 4 hundreds; 4 hundreds $+$ 2 hundreds $=$ 6 hundreds.

3-4 Multiply 2-Digit by 2-Digit Numbers

-Use the expanded and the standard algorithm to multiply 2-digit by 2-digit numbers.
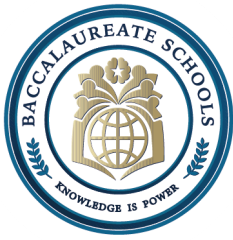
Use the Standard Algorithm

Step 1: Multiply by the ones.

```
    2
   37
× 24
─────
  148
```

Step 2: Multiply by the tens.

```
    1
    2
   37
× 24
─────
  148
+ 740    Add the partial products.
─────
  888
```

3-5 Multiply 3-Digit by 2-Digit Numbers (Pages 97 to 100)

-Multiply 3-digit by 2-digit numbers by using the standard algorithm

$$
\begin{array}{r}
\scriptstyle 7\ 1 \\
892 \\
\times\ \ \ 18 \\
\hline
7136 \\
+\ 8920 \\
\hline
16{,}056
\end{array}
$$

$900 \times 20 = 18{,}000$

$16{,}056$ is close to $18{,}000$, so, my answer is reasonable.

❖ **Note**

A Revision worksheet will be provided before the exam that will include all types of questions to expect on the final exam.

❖ **Please Review**

- All the problems done in-class and assigned as homework.

- Worksheets / Quizzes

- Additional Practice on Savvas

Good Luck!