

# Two-Point Rate of Improvement (ROI) and Gap Analysis Worksheet

## Directions

### **Two-Point ROI:**

Subtract the first score from the last score and divide by the number of weeks that progress monitoring data were collected.

### **Modified Two-Point ROI:**

Use the *median* of the first three scores obtained in the progress monitoring series for “Score on First Probe.” Then utilize the *median* of the last three scores obtained in the progress monitoring series for “Score on Last Probe.” After that, follow the directions for computing Two-Point ROI.

When deciding between the Two-Point Rate of Improvement (ROI) and the Modified Two-Point Rate of Improvement, it is important to consider any outliers present in the progress monitoring data. If the score on the initial or final probe, which is utilized in the Two-Point ROI approach, seems significantly different from the rest of the student's progress monitoring scores **or** if the score on the last probe is lower than the score on the first probe, then opting for the Modified Two-Point ROI method may be more appropriate.

### **Benchmark Expectation Scores:**

Some programs, such as i-Ready, divide Fall, Winter, and Spring benchmark expectations into percentile bands. When choosing which score to use, it is recommended to use the score closest to the 25<sup>th</sup> percentile. Since the average range in a normal distribution can be interpreted as any score between the 25<sup>th</sup> to 75<sup>th</sup> percentile, using the 25<sup>th</sup> percentile allows a struggling student the opportunity to achieve a more realistic, appropriately ambitious goal during targeted and intensive intervention.

## Two-Point Rate of Improvement (ROI) and Gap Analysis Worksheet

Student Name: \_\_\_\_\_ School: \_\_\_\_\_ Grade: \_\_\_\_ Date: \_\_\_\_\_

<b>WTSS Tier:</b> <i>(Universal/Targeted/Intensive)</i> _____ <b>Assessment/Probe Used:</b> _____ <b>Score on First Probe:</b> _____ <b>Score on Last Probe:</b> _____ <b>Fall Benchmark Expectation:</b> _____ <b>Spring Benchmark Expectation:</b> _____	<b>Current Assessment Expectation</b> <i>(Nearest benchmark)</i> _____ <b>End of Year Expectation:</b> <i>(Benchmark or Student Goal)</i> _____ <b>Number of Weeks in School:</b> _____ <b>Weeks of School Remaining:</b> _____ <b>Two-Point or Modified:</b> _____
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### Step 1: Determine Typical ROI

$$\boxed{\phantom{000}} \quad (-) \quad \boxed{\phantom{000}} \quad \div \quad \boxed{36} \quad = \quad \boxed{\phantom{000}}$$

Spring Benchmark
Fall Benchmark
# of Weeks
Typical ROI (slope)

### Step 2: Determine Student ROI

$$\boxed{\phantom{000}} \quad (-) \quad \boxed{\phantom{000}} \quad \div \quad \boxed{\phantom{000}} \quad = \quad \boxed{\phantom{000}}$$

Score on Last Probe
Score on First Probe
# of Weeks in School
Student ROI (slope)

### Step 3: Compare Student ROI to Typical ROI → Is the Student's ROI < Ambitious or Reasonable ROI?

$$\boxed{\phantom{000}} \quad \times \quad \boxed{2} \quad = \quad \boxed{\phantom{000}}$$

Typical ROI
Ambitious ROI

$$\boxed{\phantom{000}} \quad \times \quad \boxed{1.5} \quad = \quad \boxed{\phantom{000}}$$

Typical ROI
Reasonable ROI

### Step 4: Determine Gap

$$\boxed{\phantom{000}} \quad \div \quad \boxed{\phantom{000}} \quad = \quad \boxed{\phantom{000}}$$

Current Assessment Expectation
Current Assessment Performance
Current Gap (≥ 2 is significant)

### Step 5: Gap Analysis

$$\boxed{\phantom{000}} \quad - \quad \boxed{\phantom{000}} \quad = \quad \boxed{\phantom{000}}$$

End of Year Expectation
Current Assessment Performance
Difference

### Step 6: Is this Reasonable? ( Y / N )

**Option A**

$$\boxed{\phantom{000}} \quad \div \quad \boxed{\phantom{000}} \quad = \quad \boxed{\phantom{000}} \quad \text{vs} \quad \boxed{\phantom{000}}$$

Difference
# of Weeks Remaining in School
Needed ROI
Student ROI

**Option B**

$$\boxed{\phantom{000}} \quad \div \quad \boxed{\phantom{000}} \quad = \quad \boxed{\phantom{000}}$$

Difference
Student ROI
# of Weeks Needed

### Recommendations:

## EXAMPLE #1

<b>WVTSS Tier:</b> (Universal/Targeted/Intensive)	Targeted	<b>Current Assessment Expectation:</b> (Nearest benchmark)	78 (Winter)
<b>Assessment/Probe Used:</b>	DIBELS ORF	<b>End of Year Expectation:</b> (Benchmark or Student Goal)	94 (Spring BM)
<b>Score on First Probe:</b>	18	<b>Number of Weeks in School:</b>	24
<b>Score on Last Probe:</b>	67	<b>Weeks of School Remaining:</b>	12
<b>Fall Benchmark Expectation:</b>	49	<b>Two-Point or Modified:</b>	Two-Point
<b>Spring Benchmark Expectation:</b>	94		

### Step 1: Determine Typical ROI

$$\begin{array}{ccccccc}
 \boxed{94} & - & \boxed{49} & \div & \boxed{36} & = & \boxed{1.25} \\
 \text{Spring} & & \text{Fall} & & \text{\# of Weeks} & & \text{Typical ROI} \\
 \text{Benchmark} & & \text{Benchmark} & & & & \text{(slope)}
 \end{array}$$

### Step 2: Determine Student ROI

$$\begin{array}{ccccccc}
 \boxed{67} & - & \boxed{18} & \div & \boxed{24} & = & \boxed{2.04} \\
 \text{Score on} & & \text{Score on} & & \text{\# of Weeks} & & \text{Student ROI} \\
 \text{Last Probe} & & \text{First Probe} & & \text{in School} & & \text{(slope)}
 \end{array}$$

### Step 3: Compare Student ROI to Typical ROI → Is the Student's ROI < Ambitious or Reasonable ROI?

$$\begin{array}{ccccccc}
 \boxed{1.25} & \times & \boxed{2} & = & \boxed{2.50} \\
 \text{Typical ROI} & & & & \text{Ambitious ROI}
 \end{array}$$

$$\begin{array}{ccccccc}
 \boxed{1.35} & \times & \boxed{1.5} & = & \boxed{1.88} \\
 \text{Typical ROI} & & & & \text{Reasonable ROI}
 \end{array}$$

### Step 4: Determine Gap

$$\begin{array}{ccccccc}
 \boxed{78} & \div & \boxed{67} & = & \boxed{1.16} \\
 \text{Current Assessment} & & \text{Score on} & & \text{Current Gap} \\
 \text{Expectation} & & \text{Last Probe} & & \text{(\ge 2 is significant)}
 \end{array}$$

### Step 5: Gap Analysis

$$\begin{array}{ccccccc}
 \boxed{94} & - & \boxed{67} & = & \boxed{27} \\
 \text{End of Year} & & \text{Score on} & & \text{Difference} \\
 \text{Expectation} & & \text{Last Probe} & & 
 \end{array}$$

### Step 6: Is this Reasonable? (Y/N)

**Option A**

$$\begin{array}{ccccccc}
 \boxed{27} & \div & \boxed{12} & = & \boxed{2.25} & \text{vs} & \boxed{2.04} \\
 \text{Difference} & & \text{\# of Weeks} & & \text{Needed} & & \text{Student} \\
 & & \text{Remaining in School} & & \text{ROI} & & \text{ROI}
 \end{array}$$

**Option B**

$$\begin{array}{ccccccc}
 \boxed{27} & \div & \boxed{2.04} & = & \boxed{13.2} \\
 \text{Difference} & & \text{Student ROI} & & \text{\# of Weeks} \\
 & & & & \text{Needed}
 \end{array}$$

**Recommendations:** The student's current ROI is greater than the Reasonable ROI calculated. If we move this student to intensive intervention in a smaller group and provide additional time, feedback, and practice, the student may reach the Spring benchmark within the next 12 weeks of school.

## EXAMPLE #2

<b>WVTSS Tier:</b> (Universal/Targeted/Intensive)	Intensive	<b>Current Assessment Expectation:</b> (Nearest benchmark)	525 (Winter)
<b>Assessment/Probe Used:</b>	STAR Math	<b>End of Year Expectation:</b> (Benchmark or Student Goal)	571 (Spring BM)
<b>Score on First Probe:</b>	211	<b>Number of Weeks in School:</b>	14
<b>Score on Last Probe:</b>	255	<b>Weeks of School Remaining:</b>	22
<b>Fall Benchmark Expectation:</b>	479	<b>Two-Point or Modified:</b>	Mod. Two-point
<b>Spring Benchmark Expectation:</b>	571		

### Step 1: Determine Typical ROI

$$\begin{array}{ccccccc}
 \boxed{571} & - & \boxed{479} & \div & \boxed{36} & = & \boxed{2.56} \\
 \text{Spring} & & \text{Fall} & & \text{\# of Weeks} & & \text{Typical ROI} \\
 \text{Benchmark} & & \text{Benchmark} & & & & \text{(slope)}
 \end{array}$$

### Step 2: Determine Student ROI

$$\begin{array}{ccccccc}
 \boxed{255} & - & \boxed{211} & \div & \boxed{14} & = & \boxed{3.14} \\
 \text{Score on} & & \text{Score on} & & \text{\# of Weeks} & & \text{Student ROI} \\
 \text{Last Probe} & & \text{First Probe} & & \text{in School} & & \text{(slope)}
 \end{array}$$

### Step 3: Compare Student ROI to Typical ROI → Is the Student's ROI < Ambitious or Reasonable ROI?

$$\begin{array}{ccccccc}
 \boxed{2.56} & \times & \boxed{2} & = & \boxed{5.11} \\
 \text{Typical ROI} & & & & \text{Ambitious ROI}
 \end{array}$$

$$\begin{array}{ccccccc}
 \boxed{2.56} & \times & \boxed{1.5} & = & \boxed{3.83} \\
 \text{Typical ROI} & & & & \text{Reasonable ROI}
 \end{array}$$

### Step 4: Determine Gap

$$\begin{array}{ccccccc}
 \boxed{525} & \div & \boxed{255} & = & \boxed{2.06} \\
 \text{Current Assessment} & & \text{Score on} & & \text{Current Gap} \\
 \text{Expectation} & & \text{Last Probe} & & (\geq 2 \text{ is significant})
 \end{array}$$

### Step 5: Gap Analysis

$$\begin{array}{ccccccc}
 \boxed{571} & - & \boxed{255} & = & \boxed{316} \\
 \text{End of Year} & & \text{Score on} & & \text{Difference} \\
 \text{Expectation} & & \text{Last Probe} & & 
 \end{array}$$

### Step 6: Is this Reasonable? (Y/N)

**Option A**

$$\begin{array}{ccccccc}
 \boxed{316} & \div & \boxed{22} & = & \boxed{14.36} & \text{vs} & \boxed{3.14} \\
 \text{Difference} & & \text{\# of Weeks} & & \text{Needed} & & \text{Student} \\
 & & \text{Remaining in School} & & \text{ROI} & & \text{ROI}
 \end{array}$$

**Option B**

$$\begin{array}{ccccccc}
 \boxed{316} & \div & \boxed{3.14} & = & \boxed{100.5} \\
 \text{Difference} & & \text{Student ROI} & & \text{\# of Weeks} \\
 & & & & \text{Needed}
 \end{array}$$

**Recommendations:** Continue universal support, small group targeted instruction with the classroom teacher, and intensive intervention with the math interventionist. Because the student will likely not reach the goal by Spring even with all available general education supports, a referral for evaluation is warranted.