# Determining What Students Know

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### **Research Recommendations**

Research demonstrates that understanding what a student already knows allows a coach to efficiently diagnose their level of understanding at the start of a session. This initial assessment serves as a foundation for guiding the rest of the session.

Additionally, when a student explains what they already know, it helps uncover any misconceptions, allowing coaches to address and correct them. Tutors should also encourage students to attempt problems themselves while providing necessary support. This process, known as productive struggle, is critical. It is important to empower students to derive answers using their prior knowledge and reasoning before explicitly teaching new concepts.

To summarize, research suggests that a coach should:

* Assess a student’s prior knowledge.
* Guide the conversation to identify student misconceptions or errors.
* Support productive struggle.

Tutors' responses must include elements of the bolded strategies above. If a response consists of a specific content-related question, particularly a yes/no question, it is considered incorrect.

**Example of incorrect responses:***"Do you know what PEMDAS means?"  
"Do you know what the tick marks on the triangle indicate?"*

While tutors can ask students questions, these should be open-ended rather than focused on a single knowledge component. However, an exception exists: If a student has explicitly written a term (e.g., *PEMDAS*), the tutor may reference the term to assess their understanding.

## **Predict Responses**

| **Tutor Response** | **Reasoning** | **Correct (1) or Incorrect (0)?** |
| --- | --- | --- |
| *"Cindy, are you familiar with the types of triangles and the relationships of the triangle’s sides and angles?"* | This is a content-specific and yes/no question. It does not effectively assess prior knowledge. | **0** |
| *"No problem, let's try to do this together."* | While encouraging, this response does not assess the student's prior knowledge. | **0** |
| *"What do you know about the triangle?"* | This is an open-ended question that assesses the student's knowledge without being content-specific. | **1** |
| *"Thanks for setting up the problem and sharing the diagram! What have you tried so far? What about the general rules for triangles—anything special about this one?"* | The first question is open-ended and assesses prior knowledge. The second question is content-specific and yes/no, but since the first part is correct, the response is acceptable. | **1** |
| *"Roberto, this is a very good start. You have written PEMDAS—what is that?"* | Since the student has already written *PEMDAS*, asking them to explain it is a valid open-ended question. | **1** |

## 

## **Explain Responses**

### **Key Principles:**

A tutor's response should include open-ended questions to encourage the student to explain their thought process.  
*(Keywords: reviewing, revisiting, rethinking, going through the problem again, etc.)*

**Correct (1):** The tutor encourages students to explain their thinking or asks open-ended questions to assess prior knowledge.

**Incorrect (0):** The tutor does not demonstrate an understanding of the importance of open-ended questioning or assessing students' prior knowledge.

| **Tutor Response** | **Correct (1) or Incorrect (0)?** |
| --- | --- |
| *"It encouraged the student and also tried to understand what the student’s thought process was."* | **1** |
| *"It makes Roberto feel accomplished about the first step and gives him an opportunity to succeed on the next step without handing him a solution."* | **1** |
| *"It gives him a hint on what to do next while complimenting what he has already done, but not giving away the answer."* | **1** |
| *"Help him remember what he has learned."* | **0** |
| *"It gives him a chance to speak."* | **0** |
| *"It tells him that he is correct so far, gives him a hint for the next step, and a chance to do it himself."* | **0** |

# Giving Effective Praise

## **Research Recommendations**

Correct tutor responses must be encouraging, positive, and acknowledge the student’s focus on the learning process. Table 1 below provides sample tutor responses to struggling students, along with explanations of the reasoning behind their classification as “correct” or “incorrect.”

### **Criteria for Effective Praise:**

Praise should be:

* Sincere, earned, and truthful – Students should perceive praise as meaningful rather than generic.
* Specific – Praise should include details about what the student did well.
* Immediate – Given right after the student’s action for maximum impact.
* Authentic – Avoid overused phrases like *“Great job”*, which lose meaning when repeated too often.
* Focused on the learning process – Praise should highlight effort, perseverance, or strategy rather than ability or intelligence.

### **Guidelines for Tutor Responses:**

Tutor responses do not need to meet all criteria, but they must go beyond general praise to receive full credit. Simply saying *“Great job”* without specifying what the student did well is insufficient. Praise should be tied to effort, learning strategies, or perseverance, and it must remain positive and encouraging.

## **Predict Responses**

## 

| **Tutor Response** | **Reasoning** | **Correct (1) or Incorrect (0)?** |
| --- | --- | --- |
| *"You did a great job on that problem. Well done."* | Positive and sincere, but lacks specificity and does not focus on the learning process. | **0** |
| *"Good job! Why don't we try solving a few more problems so that you feel confident about these questions?"* | Positive and encouraging, but does not explicitly acknowledge perseverance or effort. Suggests practice leads to confidence, but lacks praise for persistence. | **0** |
| *"It was difficult, but you persevered and succeeded. Such grit is an important life skill, and I'm proud of what you accomplished. You should be proud too."* | Positive, sincere, and acknowledges both perseverance and learning as a process. | **1** |
| *"You have done a good job so far. It is normal to feel challenged at this stage. Keep going."* | A nuanced response—while it includes *“good job,”* it also acknowledges perseverance through challenge. | **1** |

## **Explain Responses**

Tutor responses should focus on the student’s learning process and effort (e.g., perseverance, persistence, problem-solving, or overcoming difficulty).

**Correct (1):** The tutor provides specific details about what the student did well and emphasizes learning effort over natural ability.

**Incorrect (0):** The tutor’s response focuses only on **l**earning outcomes (e.g., *"Good job"*) or is unrelated to praise.

| **Tutor Response** | **Reasoning** | **Correct (1) or Incorrect (0)?** |
| --- | --- | --- |
| *"It is sincere and positive."* | Lacks specificity about what the student did well or how effort contributed to learning. | 0 |
| *"Carla will be more motivated and confident to continue completing her homework."* | Does not explicitly acknowledge the student’s effort or the learning process. | 0 |
| *"It's important to praise the effort rather than 'smartness' since intelligence is often seen as an immutable trait. Learning takes effort, and that’s what you want to encourage."* | Clearly emphasizes praising effort over innate ability, reinforcing a growth mindset. | 1 |
| *"Encouraging progress through effort is the most beneficial approach. Growth mindset should be encouraged."* | Highlights the value of perseverance and learning over time. | 1 |
| *"It shows you have noticed how much she has worked, and you are willing to work on it together."* | Acknowledges student effort and reinforces collaboration. | 1 |
| *"Because she is feeling self-worth and not like a weak student."* | Not directly related to praising effort, perseverance, or the learning process. | 0 |

# Helping Students Manage Inequity

## **Lesson Objectives:**

* **Recognize** when a student is experiencing inequity related to their learning.
* **Apply strategies** to help students manage inequities by assisting them in advocating for themselves.

## **Research Recommendations**

Encouraging students to work hard alone is often insufficient when they lack access to necessary tools and resources. This can create false hope, which is superficial and does not lead to meaningful change. Instead, critical hope empowers students with strategies, tools, and resources that help them advocate for themselves and navigate structural inequities effectively.

### **Effective Tutor Strategies:**

Assist students in identifying the inequity and encourage them to take action.  
Support student self-advocacy by guiding them to talk directly with their teacher or the appropriate authority.  
Provide students with actionable resources that empower them to navigate structural inequality in a way that can lead to meaningful change.

### **What to Avoid:**

Offering false hope by simply reassuring students without providing actionable solutions.  
 Suggesting students solve the problem on their own without advocating for themselves.  
 Failing to guide students in addressing the inequity with the appropriate authority.

**Tutor responses need to:** tutors should apply the strategy of assisting middle or high school students in encouraging the student to advocate for themselves by talking directly with their teacher or person in charge.

Correct (1): Tutor suggests the student talks directly to the teacher (or adult in charge) and encourages the student to advocate for themselves (Strategy: Suggest students to talk to their teacher + Reason, e.g, did you talk to your teacher letting her know that you do not have internet, or that you cannot hear in the classroom?)

Incorrect (0): Tutor suggests the student find a way to solve the problem on their own, merely asks if the student spoke with their teacher without encouraging advocacy, or makes suggestions that do not directly involve the student advocating for themselves in attending to their needs. (e.g., Strategy: let students to solve issues, e.g., did you consider going to library to get WIFI, or did you consider moving to a different area of the room)

## **Predict Responses**

| **Tutor Responses** | **Reasoning** | **Score** |
| --- | --- | --- |
| *"I would ask Alexis if there is any way her seat could be changed, and then I would give her some tips on how to talk to her teacher about the issue at hand."* | Encourages self-advocacy by guiding the student to speak with their teacher and providing strategies for the conversation. | 1 |
| *"Hi Alexis, have you ever talked to your teacher about this? Your teacher might not know about the situation. Let's do this together and talk with her next time."* | Encourages the student to advocate for themselves and offers support in the process. | 1 |
| *"I'm so sorry to hear about that. It is not your fault for not doing quizzes well. Let's work together and think about what we can do."* | While empathetic, it does not provide guidance on how the student can address the issue. | 0 |
| *"No worries, Jeremiah. Let's talk to the teacher."* | Suggests speaking with the teacher, but does not encourage the student to take action themselves. | 0 |
| *"I'm sorry to hear about the difficulties you're facing, Jeremiah. Let's work together to come up with a solution and find a way to address this issue with your teacher, so you have a fair opportunity to succeed in the class."* | Encourages problem-solving with the student while guiding them to speak with their teacher. | 1 |
| *"I would provide him with other possible ways to access the internet that help him do the homework equally. For example, he could do the homework at school."* | Does not encourage self-advocacy, instead suggests an alternative solution that does not address inequity directly. | 0 |
| *"I would tell him that it was unfair of his teacher to do that and that his parents would understand that it was not his fault and not be upset with him."* | Does not provide actionable guidance for the student to advocate for themselves. | 0 |

### **Explain Responses**

**Tutor responses need to:** tutors should explain the tutor’s rationale for their predict response

Correct (1): The tutor’s response demonstrates that the tutor recognizes that the student needs support in advocating for themselves and encourages the student to act.

Incorrect (0): The tutor’s response does not recognize that the student needs support in advocating for themselves.

### 

| **Tutor Response** | **Correct (1) or Incorrect (0)?** |
| --- | --- |
| *"We do not want to create more burden by simply telling students not to worry and that nothing is going to happen, or telling them to toughen through."* | 0 |
| *"I think it will work because there is no harm in trying to figure out what the teacher's perspective is, since Jeremiah has a good reason."* | 0 |
| *"I think it will assist her because not only will it help her face this situation, but also help her in future problems as well."* | 0 (Does not clearly outline how the student will advocate for themselves.) |
| *"It practices critical hope. It encourages her to advocate for herself by speaking to the teacher about it, and I offer my own help to assist her."* | 1 |
| *"The response shows the empathy and willingness of the tutor to help him out."* | 0 |
| *"The response shows that the tutor really wants to help Alexis and does not blame her for the issue."* | 0 |
| *"I would need to help Jeremiah first relieve some stress and assure him that everything will be fine. Then, I would look for alternative solutions so that Jeremiah's lack of internet access at home does not distract him from his studies."* | 0 (Does not encourage self-advocacy or provide tools for the student to address the inequity.) |
| *"Helping him figure out what to do."* | 0 |
| *"Help her do it on her own and get the result she wants."* | 0 (Does not clearly state what the student should do.) |
| *"It validates his feelings and offers a potential solution to the problem."* | 0 |
| *"It prepares Alexis to solve the problem herself by practicing in a low-stress environment. It would make her more confident to talk to her teacher and do better in class."* | 1 |
| *"Firstly, it assures that it is not Jeremiah's problem. Second, it comforts him that his parents will stand by his side. Third, it provides a plausible solution to the problem."* | 0 |
| *"Because it teaches Alexis a possible way to avoid similar problems in the future."* | 0 |
| *"That would be the right approach because I am helping the student solve his problem rationally."* | 0 |
| *"It aligns with what I would have recommended—Alexis should reach out to her teacher about the problem she is facing."* | 1 |

# Reacting to Errors

**Research-Based Best Practices**

Studies have shown that how tutors respond when students make mistakes affects motivation and learning outcomes. Encouraging students to identify and correct their own mistakes before offering direct help fosters critical thinking, independence, and engagement.

### Why This Approach Works:

1. Encourages self-correction: Students recognize and fix "easy mistakes" on their own, improving motivation.
2. Develops critical thinking skills: Helps students build independent learning strategies.
3. Promotes ownership of learning: Engaging students in error analysis fosters deeper understanding. *(TeachThought Staff, 2021)*

However, it is crucial to balance self-correction with support to prevent excessive frustration. If a student cannot identify their mistake, the tutor should provide direct guidance with an explanation.

Additionally, praising effort helps students remain motivated despite errors, reinforcing a growth mindset *(Master, 2015)*.

## **Tutor Strategies:**

Avoid direct language about the student’s error (e.g., *"That’s incorrect,"* *"You made a mistake."*).  
Use indirect guidance to help students recognize errors (e.g., *"Let's try a different approach,"* *"What do you think should happen first?"*).  
Praise effort to encourage persistence (e.g., *"You're working hard on this—let’s go through it together!"*).  
Foster metacognition by prompting students to review their steps (e.g., *"Can you walk me through how you solved this?"*).

### **What to Avoid:**

Directly stating mistakes (e.g., *"This is wrong,"* *"You need to fix that."*).  
Lack of praise or encouragement, which may lower confidence.  
Not providing guidance for self-correction.

## **Predict Responses**

**Correct (1)**: Effective tutor responses should praise the student’s effort, implicitly guide the student to correct errors. These responses avoid directly pointing out errors and instead use prompts to encourage students to reflect and explore alternative methods.

**Incorrect (0)**: Responses that explicitly point out the student's errors are considered incorrect. Using direct negative language or failing to motivate the student can hinder the learning experience.

| **Tutor Response** | **Rationale** | **Correct (1) or Incorrect (0)?** |
| --- | --- | --- |
| *"Good effort! You got most of the addition right, but there is a small problem at the start. What was your first step when you solved this problem?"* | While praising effort and prompting the student, it still uses the word "problem," which may cause frustration. | 0 |
| *"Great effort so far! Can you explain how you approached this problem?"* | Uses praise and a metacognitive question to guide the student in self-correction. | 1 |
| *"Can you step me through how you solved this problem?"* | Does not include motivating praise, missing an opportunity to encourage the student. | 0 |
| *"Everyone makes small mistakes in arithmetic—let’s look at some ways to check your work as you go along."* | Stating that "everyone makes mistakes" may not feel encouraging to the student. | 0 |
| *"Lucy, you did well! But I have another way to solve this problem. Let’s try it together—what do you think?"* | Reframes the mistake positively and encourages collaboration. | 1 |
| *"This is very close! I see one issue. Can you walk me through how you worked through the problem?"* | Praises effort but still uses the word "issue," which could discourage the student. | 0 |
| *"Thank you for writing out the problem and your answer so I can see your work. Let me show you some examples of how to add numbers that add up to more than 10."* | Provides examples but does not help the student recognize their mistake. | 0 |

### **Explain Responses**

**Correct (1)**: The tutor demonstrates an understanding that the tutor understands they should implicitly and not directly call attention to the students’ error, focusing on the learning process.

**Incorrect (0)**: The does not demonstrate an understanding that the tutor understands they should implicitly and not directly call attention to the students’ error, focusing on the learning process. The tutor’s responses focuses on the error or mistake and remedying it.

| **Tutor Response** | **Correct (1) or Incorrect (0)?** |
| --- | --- |
| *"She has the numbers aligned properly. This gives me a baseline to see where she is making mistakes. She will be motivated because she got the first step right. At this point, I think Lucy never learned how to carry over numbers from one place value to another (e.g., units, tens, hundreds)."* | **0** |
| *"Start with a positive statement and then offer to do it together, fostering a team feeling. Go through the steps to see if she can find the error herself."* | **1** |
| *"Stays positive. They need to feel like they solved it."* | **0** |
| *"Recognizing her effort is important. Plus, encouraging her to work together in identifying where the error is will boost her self-confidence."* | **1** |
| *"It points out where he may have gone wrong."* | **0** |
| *"This way, I can see where he went wrong with the problem and address the mistake without telling him what to do."* | **0** |

# Responding to Negative Self-Talk

**Lesson Objectives:**

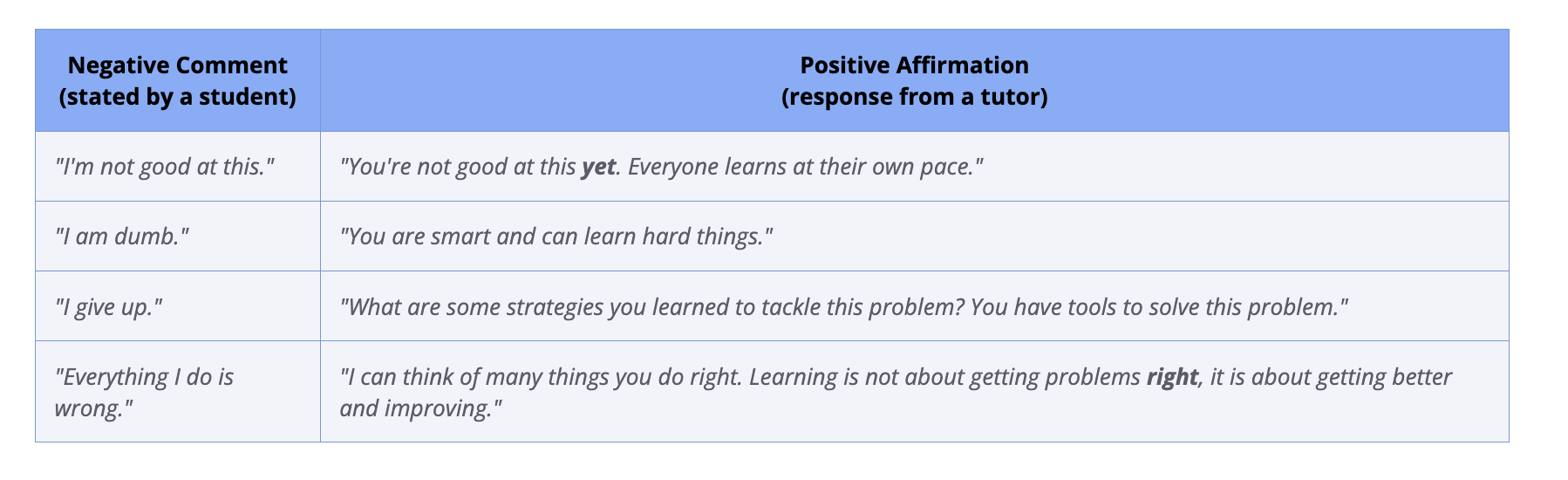
* Recognize negative self-talk by students
* Apply strategies of effectively responding to a student engaging in negative self-talk

When witnessing a student engaged in negative self-talk, it is important to intervene by assisting students with correcting the behavior. Tutors should ensure to recognize, or validate, the student’s feelings and then reframe the situation. Then they should encourage positive self-talk by modeling and, if possible, providing examples of student’s past successes.

**Rubric for *Predicting* the Best Approach**

When responding to a student who is engaging in negative self-talk, tutors should:

* Acknowledge a student's feelings and validate them, such as by saying, *"I understand you may be frustrated"* or *"I realize this is hard for you."*
* Remind the student of their strengths and/or model positive self-talk. For instance, by stating a positive affirmation related to the student’s negative comment and/or reminding a student of a time where they conquered a hard task.

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**Research-Recommended Approach**

When hearing students engage in negative self-talk it is important to intervene by assisting students with correcting the behavior. Tutors should ensure to recognize, or validate, the student's feelings and then reframe the situation.

**Predict Responses**

**Correct Responses:** The tutor response acknowledges the student’s feelings by validating, or acknowledging them and providing positive affirmation reminding them of their strengths.

**Incorrect ResponseS:** The tutor response does not validate the student’s feelings by acknowledging them.

| **Tutor response** | **Reasoning** | **Correct (1) or Incorrect (0)?** |
| --- | --- | --- |
| *I hear your concerns about comparing yourself to your classmates. It's natural to feel this way sometimes. Let's talk about your unique strengths and the progress you've made. Remember, intelligence is diverse* | The response validates the student’s feelings and reminds the student of their strengths and/or promote positive self-talk. | 1 |
| *It's okay to feel that way, but remember where you started and how far you've come. Learning is a journey, and your dedication has already shown significant growth* | The response validates the student’s feelings and reminds the student of their strengths and/or promote positive self-talk. | 1 |
| *I understand it's easy to doubt yourself, but it's important to treat yourself with kindness. Instead of saying you're not smart, recognize that you're constantly learning and improving* | The response validates the student’s feelings and reminds the student of their strengths and/or promote positive self-talk. | 1 |
| *Don't worry, you're smarter than you think. Just look at your last test score; it's higher than some of your classmates* | This response reinforces the idea of comparing intelligence directly and might make the student feel validated only through outperforming others. | 0 |
| *You're just having a bad day. I'm sure you're just as smart as your classmates.* | This response dismisses the student's feelings without addressing their concerns about self-perceived intelligence | 0 |
| *Let's not dwell on comparisons. Today's topic is important. Pay attention and you'll understand* | This response disregards the student's feelings and focuses solely on the lesson, missing an opportunity to provide emotional support | 0 |

**Explain Response**

Correct (1): The tutor’s response demonstrates that they understand the importance of validating or acknowledging a student’s feelings. The importance of providing positive affirmations may be included but is not necessary.

Incorrect (0): The tutor responses does not demonstrate that the tutor understands the importance of validating student’s feeling nor providing or modeling positive affirmation.

| Tutor’s response | Reasoning | Score |
| --- | --- | --- |
| *It makes Eduardo feel confident about his ability to find the right answer and will motivate him* | The response does not demonstrate an understanding of validating the student’s feelings. | 0 |
| *By acknowledging Geetika's self-doubt and encouraging her to keep working, she will feel more motivated and ready to tackle the problem.* | The responses demonstrates the tutor’s understanding of acknowledging the student’s feelings. | 1 |
| *No negative feeling, encourage student.* | The response does not demonstrate an understanding of validating the student’s feelings. | 0 |
| *When a student is able to slowly break down a problem and reach the desired solution, they gain more confidence in the method and are able to solve problems.* | The responses demonstrates the tutor’s understanding of acknowledging the student’s feelings. | 0 |

# Supporting a Growth Mindset Rubric

**Research Recommendation(s)**

Studies show students perform better and learn more when they are praised for putting in effort and not for merely getting the problems correct (Dweck, 2008). For this reason on (2), Option C is the most desired response or correct answer:

“Juan, I like how you tried several different strategies and made many attempts. You did a great job maintaining effort!”

The above strategy provides consistent encouragement for putting forth effort regardless of if he got the problem correct. Praise is a powerful strategy to get students motivated to learn and fosters a *growth mindset*. **Students with a growth mindset believe that they can learn more and become smarter if they work hard and persevere.** However, when praise is focused only on getting the correct answer it contributes to a *fixed mindset. S*tudents displaying a fixed mindset believe their intelligence is static and cannot be improved upon by hard work and perseverance (Dweck, 2008).

Commending students for putting forth effort is more effective than *praising for intelligence*, or simply getting the problem correct. When you *praise for intelligence* it gives students a short burst of pride but makes students fearful of getting answers wrong, less willing to work hard, and less confident in their learning. When you *praise for effort*, regardless of if students got the problem correct or not, you are reinforcing the process which fosters motivation, increases effort, and greater self-confidence (Dweck, 2008).

Expert tutors and research suggest instruction and language used with students can be altered to foster a growth mindset and change the way students perceive the learning process. Here are examples of how tutors can alter their language from a fixed mindset to a growth mindset:

| **Fixed Mindset Statements** | **Growth Mindset Statements** |
| --- | --- |
| “It’s OK if you’re having trouble. Maybe algebra isn’t one of your strengths.” | “When you learn how to do a new kind of problem, it develops your math brain.” |
| “Great effort. You tried as hard as you could.” | “The goal isn’t to get it right immediately. The goal is to improve your understanding step by step. What can you try next?” |
| “You may not be talented in math but you tried. Good for you.” | “That feeling you’re experiencing of algebra being hard is the feeling of your brain developing and improving.” |

These examples stress the importance of embracing challenges and valuing the learning process. They also focus on *praising for effort*, a key ingredient in supporting a growth mindset (Dweck, 2008).

Studies show that commending students for putting forth effort is more effective than praising for getting answers correct. When you praise students for their effort, regardless of if they got the problem correct or not, you are increasing their motivation to learn and fostering a growth mindset.

**Predict Responses**

Correct (1): The tutor’s response acknowledges, or praises, student effort or encourages the student to engage in challenging problems to support a growth mindset.

Incorrect (0): The tutor’s response does not acknowledge, or praise, student effort nor encourages the student to engage in challenging problems to support a growth mindset.

| **Tutor response:** | **Rationale** | **Score** |
| --- | --- | --- |
| *Imani, your natural talent in math is commendable, but to continue growing, it's essential to embrace challenges and foster a growth mindset. Consider setting stretch goals that push your boundaries and exploring advanced math concepts or projects that pique your interest. Collaborating with peers, participating in enrichment activities, and celebrating achievements can keep you engaged and motivated. Remember to connect math to real-life applications and seek out resources that inspire curiosity and creativity. By embracing challenges and maintaining a positive attitude, you'll continue to thrive and find fulfillment in your mathematical journey.* | Acknowledges student effort but also provides support to tackle fixed mindset | 1 |
| *I see your good at this, lets try solving a little more challenging problems together* | Acknowledges student effort and provides adequate support to tackle fixed mindset | 1 |
| *Great work, Juan. You kept trying and applied your knowledge multiple ways and stuck with it til you succeeded.* | Acknowledges and praises student effort | 1 |
| *Imani, lets try some advanced problems which will challenge you a bit.* | Encourages challenging problems | 1 |
| *I believe you can do this! Lets look at this together.* | Motivating but no praise or acknowledgement for the effort student has put in | 0 |
| *Juan, I am very impressed that you never chose to give up after not getting them correct for many times. You did a great job for maintaining this level of motivation.* | Acknowledges and praises effort | 1 |

**Explain Responses**

**Tutor responses need to:** tutors should explain the tutor’s rationale for their predict response

Correct (1): The tutor response demonstrates an understanding of the importance of praising students for effort and seeking challenges to foster a growth mindset.

Incorrect (0): The tutor response does not demonstrates how an understanding of the importance of praising students for effort and seeking challenges to foster a growth mindset.

| **Tutor response** | **Rationale** | **Score** |
| --- | --- | --- |
| *We need to engage the students positively and give them the motivation to play games in their free time.* | (incomplete or inaccurate reasoning) | 0 |
| *I believe this approach will best support Juan because it focuses on his effort and perseverance, which are key aspects of developing a growth mindset. When students are praised for their effort rather than just their success, they are more likely to be motivated to keep trying and improving, even when faced with challenges. It encourages them to view challenges as opportunities for growth rather than obstacles.* | (depicts proper understanding of importance of praising for effort) | 1 |
| *Increase Imani's motivation to learn and her engagement.* | (accurate in identifying how does motivating students help) | 1 |
| *I let her know that I am tracking her progress. I let her know she does not know it all and that I can help to continue to challenger her.* | (negative response) | 0 |
| *reinforces positivity towards Juan not giving up* | (accurate in identifying and appreciating how motivation would help) | 1 |
| *This best supports him because it focuses on his hard work, and the fact that he was able to succeed because he continued to try.* | (depicts understanding and accurate reasoning) | 1 |

# Using Motivational Strategies Rubric

## **Research Recommendation(s)**

Research supports rewarding students when they achieve a goal, demonstrate perseverance, or are exhibiting a desired behavior. For this reason, Option D (4) is the most desired response or correct answer.

“Kevin, I am so proud that you persevered through the week completing math lessons. You met your effort goal! As a reward, I promised we could talk about baseball for 10 minutes. Please tell me, how is your season going?”

Studies show that students are more likely to complete math assignments and put effort into learning math when they feel motivated. There are two types of motivation. *Extrinsic motivation* is the completion of a task for an external reward, such as to earn a trophy or get a good grade. *Intrinsic motivation* is the completion of a task for the sake of personal satisfaction, or internal reward, such as working hard on an assignment to learn more and become smarter.

Intrinsic motivation derives from students enjoying a task and taking ownership. For this reason the effects of intrinsic motivation last longer and go farther than extrinsic motivation. However, using extrinsic motivation within a short-term mentoring environment can increase student motivation to learn and increase engagement, particularly in conjunction with intrinsic motivation. Mentors can use both types of motivation to engage students (WeAreTeachers.com, 2021). In the previous scenario, the extrinsic reward of providing the student time to talk about baseball, will help motivate Kevin to continue working hard on learning math.

Expert tutors and research suggest using both intrinsic and extrinsic motivational strategies to increase student motivation and interest in learning. Some common examples witnessed by mentors for both types of motivation are shown below:

| **Intrinsic Motivation** | **Extrinsic Motivation** |
| --- | --- |
| A student playing a sport because it makes them feel good emotionally. | A student completing a math problem to gain time talking with their mentor about a favorite hobby or interest. |
| Staying longer at work or working longer hours because you believe in your work. | A student meeting an effort goal to receive extensive praise from their mentor for hard work and perseverance. |
| A student getting good grades for the satisfaction of working hard in order to learn and overcome obstacles. | A student completing a task or assignment to earn a trophy, badge, star, or similar reward. |

**Predict Responses**

**Correct (1)**: The tutor provides the student extrinsic motivation by giving them a reward or time to discuss their interests; or the tutor supports intrinsic motivation by acknowledging student’s efforts or connecting learning to student’s interests.

**Incorrect (0)**: The tutor response does NOT provide the student extrinsic motivation by giving them a reward or time to discuss their interests; nor does the tutor support intrinsic motivation by acknowledging student’s efforts or connecting learning to student’s interests.

| **Tutor response:** | **Score and Rationale** |
| --- | --- |
| *One way to motivate students to complete their math work is to make it relevant to their lives. For example, you could show students how math is used in everyday life, such as in sports. You could also use real-world examples to illustrate math concepts.* | 0 |
| *Carla, have you ever wondered how designers use math to create perfect patterns or calculate fabric needed for a scarf? Math is like the secret ingredient to bringing your fashion ideas to life. Let's explore how we can use numbers to enhance your designs.* | 1 (connecting learning to student’s interests) |
| *I appreciate your interest in fashion. Let me help you with understanding your math assignment. It will help you to continue learning and be successful in math.* | 0 |
| *I know math can be tricky sometimes, but think of it like designing your own clothes! Every problem is a new style to create. With a little effort and creativity, you can solve each one. Let’s work together and make math as fun as fashion. You can do it!* | 0 (on the fence) |
| *."Hey Kevin! Just like in baseball, where practice and focus help you hit that home run, working on your math skills is like training for the big game. The more you practice, the better you'll get! Imagine math as your warm-up before a big gameâ€”every problem you solve is like a pitch you knock out of the park. Let's get that math done so you can crush it, both on the field and in the classroom!"* | 1 (Provides intrinsic motivation by comparing the satisfaction from math to baseball, connecting into student’s interest) |
| *just like in fashion, there are a lot of patters in math. sometimes, some concepts can be applied different ways, like how a custom scarf can be worn different ways* | 0 (No motivation only interests compared) |
| *Hey Kevin! Great job on completing your math lessons this week! Your hard work is really paying off. Let's celebrate your success by talking about your baseball season. How's it going? Maybe we can even find some ways to use your baseball stats to practice more math!* | 1 (Provides extrinsic motivation of talking about game) |
| *Carla, I know math might feel tough right now, but think about how you use math when designing your scarves. When you choose the right measurements, calculate the right fabric length, or decide on how much material to use, that's math in action! So, this math assignment is really similar to what you're doing with your scarvesâ€”itâ€™s just helping you build the skills to be even better at it. Let's tackle this together, and when weâ€™re done, you can tell me all about the designs you're working on. Youâ€™ve got this!* | 1 (Provides both, extrinsic and intrinsic motivation by talking about designs and similar skills/satisfaction) |
| *It is very good for you to balance your life between education and sports. So I would like to tell you that first, complete the math work; later, you can play baseball.* | 1 (Provides extrinsic motivation to be able to play baseball if work is done) |

**EXPLAIN RESPONSES:**

**Tutor responses need to:** tutors should explain the tutor’s rationale for their predict response

Correct (1): The tutor demonstrates understanding of how tutors can use extrinsic and/or intrinsic motivation to support students.

Incorrect (0): The tutor does NOT demonstrate understanding of how tutors can use extrinsic and/or intrinsic motivation to support students.

| **Tutor response:** | **Score and Rationale** |
| --- | --- |
| *It aligns Kevin's love of sports, particularly baseball, with his math studies to make math more appealing, relevant, and motivating for him* | 0 (Does not accurately describe how the motivation would support the student) |
| *This approach acknowledges Kevin's hard work and offers a baseball-related reward. It makes math more enjoyable and shows that you value his interests. It reinforces positive behavior while building a stronger connection.* | 1 (Appreciates and accurately identifies motivation for student growth) |
| *This approach connects Carla's personal interests to the task at hand, making the math assignment feel more relevant and authentic. By acknowledging her passion for scarf design, I help her see that the math she is doing is not separate from her interests but part of her everyday life. Offering her a break to share her passion after completing the work also serves as a motivational incentive. This method fosters a sense of accomplishment and encourages her to keep pushing through challenges, knowing the task is achievable and relevant.* | 1 (Understands the importance of motivation and describes how it is helping the student) |
| *Kevin's motivation to complete his math work and increase engagement* | 0 (No reasoning provided) |
| *Acknowledges Achievement: By praising Kevin for meeting his effort goal, the message reinforces his hard work and success, which boosts his self-esteem and motivation.* | 0 (Incomplete, no reasoning for how motivation supports the student) |
| *Would make math relevant to her.* | 0 |