

Having Your Cake, and Drinking Too

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| 12 Superior | + | <ul style="list-style-type: none"> • Shows a pattern between positive and negative exponents, i.e. $2^{-2} = \frac{1}{2^2}$ |
| 10 Outstanding | + | <ul style="list-style-type: none"> • Attempts to explain why a negative exponent means dividing by 2 a certain number of times. $2^{-B} = \frac{1}{2^B}$ |
| 9 Great | + | <ul style="list-style-type: none"> • For #2 & #3 shows the result of "eating cake and drinking beverage" as an exponential number in base 2. |
| 8 Good | + | <ul style="list-style-type: none"> • Somehow equates negative exponents with shrinking the height. |
| 7 Acceptable | + | <ul style="list-style-type: none"> • Attempted to answer all 5 questions and shows a generalization for #4, $2^c \cdot (\frac{1}{2})^B = 2^{c-B}$ |
| 6 Weak | | <ul style="list-style-type: none"> • Poor attempt on everything, but recognizes that the exponent for the height multiplier is the difference between the number of ounces of cake and the number of ounces of beverage. |
| 5 What Planet | | <ul style="list-style-type: none"> • Egregious errors! Missing basic ideas: the height stays the same when Alice eats and drinks the same amounts (#1); the exponent for the height multiplier is the difference between the number of ounces of cake and the number of ounces of beverage (#4). |