10 Plus 1:
Creating Depth and Complexity in Math

10 Strategies...
for creating deep math tasks

1. **Write a story.**
   Create a story for a calculation or a real-world context for a math concept.

2. **Draw a picture.**
   Draw a picture or diagram that shows the meaning of a concept or calculation.

3. **Explain why.**
   Justify a prediction, claim, or answer using logic.

4. **Find another way.**
   Find a different strategy or another answer.

5. **Compare and contrast.**
   Compare and contrast expressions, shapes, patterns, strategies, representations, etc.

6. **Start with the answer.**
   Begin with the answer and find the "question."

7. **Remove information.**
   Make a task more open-ended by removing key words or numbers.

8. **Solve to learn.**
   Perform the task as a problem before teaching a method.

9. **Build a pattern.**
   Use the task to create or extend a pattern of numbers, equations, or shapes.

10. **Ask "What if...?"**
    Change one or more elements of the task, and observe the effects.

...Plus 1 Strategy
for creating complex math tasks

Use *more...*
digits, numbers, shapes, parts, variety, steps, ideas, information, definitions, categories, relationships, etc.

Ten Plus One Template

1. Identify a math task.	4. Anticipate students' thinking.
2. Choose a *Ten Plus One* strategy.	
3. Apply the strategy to enhance the task.	

1. Identify a math task.	4. Anticipate students' thinking.
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Sample Tasks

Grade 1
1. 36 + 7
2. What number is 10 less than 83?
3. True or False: 7 + 4 = 6 + 5
4. Which is longer? _____   _____

Grade 2
1. Write <, >, or =.   302 ____ 297
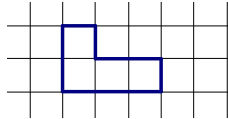2. Count the sides and name the shape.
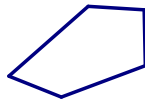
3. 35 − 18
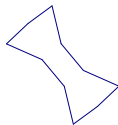4. Does the shaded part show a half, a third, or a fourth?
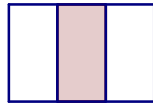
Grade 3
1. Find the area.

2. 10 x 37
3. Round 293 to the nearest hundred.
4. 15 ÷ 3
5. Make the fractions equivalent. $\dfrac{2}{3}$ $\dfrac{6}{\Box}$
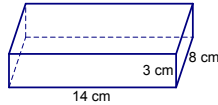
Grade 4
1. Find the quotient and remainder. 352 ÷ 7
2. Find all of the factors of 42.
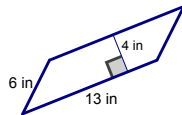3. Draw the lines of symmetry.

4. $\dfrac{5}{8} - \dfrac{1}{4}$

Grade 5
1. Write <, >, or =.   0.7 ___ 0.58
2. Evaluate the expression. $28 - 16 \div 2$
3. $8.4 \cdot 1000$
4. $6 \cdot \dfrac{2}{3}$
5. Find the volume of the rectangular prism.

Grade 6
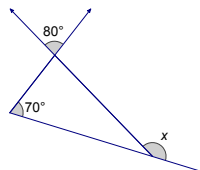1. 18 is what percent of 40?
2. $6 \div \dfrac{2}{3}$
3. Find the area of the parallelogram.

4. Find the mean, median, and range.   31, 27, 32, 65, 29

Grade 7
1. $13 - -5$
2. A shirt that costs 16.50 is on sale for 20% off. What is the sale price?
3. Simplify. $-5x - 3 + 9x - 1$
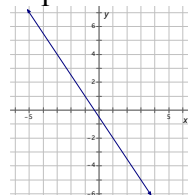4. Find the measure of $\angle x$.

Grade 8
1. Decide if each number is rational or irrational:

$$\dfrac{3}{4} \quad \sqrt{10} \quad \dfrac{2.3}{0.8} \quad \pi \quad 0 \quad -6 \quad 2 \cdot \sqrt{9}$$

2. Write 36,100 in scientific notation.
3. Find the slope of the line.

4. Find the length of the hypotenuse of a right triangle whose legs have lengths of 4 cm and 10 cm.