Mathematics Grade 6 IAB - Expressions and Equations

11 questions are represented by the targets listed in Claim 1.

Claim #1
Concepts and Procedures
Students can explain and apply mathematical concepts and carry out mathematical procedures with precision and fluency.

Expressions and Equations

Target E
Apply and extend previous understandings of arithmetic to algebraic expressions.
Standards 6.EE 1
6.EE 2
6.EE 3
6.EE 4
DOK 1, 2

Target F
Reason about and solve one-variable equations and inequalities.
Standards 6.EE 5
6.EE 6
6.EE 7
6.EE 8
DOK 1, 2

Target G
Represent and analyze quantitative relationships between dependent and independent variables.
Standards 6.EE 9
DOK 2

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Ref: Math Interim Assessment Blocks Blueprint
Revised 7/27/16
1 question is represented by the targets listed in Claim 2.

Claim #2
PROBLEM SOLVING
Students can solve a range of complex well-posed problems in pure and applied mathematics, making productive use of knowledge and problem-solving strategies.

Target A
Apply mathematics to solve well-posed problems in pure mathematics and those arising in everyday life, society, and the workplace.

Target B
Select and use appropriate tools strategically.

Target C
Interpret results in the context of a situation.

Target D
Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flowcharts, or formulas).


DOK 2, 3

DOK 1, 2, 3

DOK 1, 2, 3

DOK 1, 2, 3

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Revised 7/27/16
1 question is represented by the targets listed in Claim 3.

Claim #3
COMMUNICATING REASONING

Students can clearly and precisely construct viable arguments to support their own reasoning and to critique the reasoning of others.

Target A
Test propositions or conjectures with specific examples.

Target B
Construct, autonomously, 12 chains of reasoning that will justify or refute propositions or conjectures.

Target C
State logical assumptions being used.

Target D
Use the technique of breaking an argument into cases.

Target E
Distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in the argument—explain what it is.

Target F
Base arguments on concrete referents such as objects, drawings, diagrams, and actions.

Target G
At later grades, determine conditions under which an argument does and does not apply. (For example, area increases with perimeter for squares, but not for all plane figures.)


DOK 2, 3
DOK 2, 3, 4
DOK 2, 3
DOK 2, 3
DOK 2, 3
DOK 2, 3

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Claim #4
MODELING AND DATA ANALYSIS
Students can analyze complex, real-world scenarios and can construct and use mathematical models to interpret and solve problems.

Target A: Apply mathematics to solve problems arising in everyday life, society, and the workplace.
Target B: Construct, autonomously, chains of reasoning to justify mathematical models used, interpretations made, and solutions proposed for a complex problem.
Target C: State logical assumptions being used.
Target D: Interpret results in the context of a situation.
Target E: Analyze the adequacy of and make improvements to an existing model or develop a mathematical model of a real phenomenon.
Target F: Identify important quantities in a practical situation and map their relationships (e.g., using diagrams, two-way tables, graphs, flowcharts, or formulas).
Target G: Identify, analyze and synthesize relevant external resources to pose or solve problems.


DOK 2, 3
DOK 2, 3
DOK 2, 3
DOK 2, 3
DOK 2, 3
DOK 2, 3
DOK 3, 4

1 question is represented by the targets listed in Claim 4.