Mathematics Grade 8 IAB - Expressions and Equations II with Statistics

10 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 D
Analyze and solve linear equations and pairs of simultaneous linear equations.

Standards
8.EE 7
8.EE 8

DOK 1, 2

Statistics and Probability

Target J [a/s]*
Investigate patterns of association in bivariate data.

Standards
8.SP 1
8.SP 2
8.SP 3
8.SP 4

DOK 1, 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
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.)

8.EE.1, 8.EE.5, 8.EE.6, 8.EE.7a, 8.EE.7b, 8.EE.8a, 8.F.1, 8.F.2,F.3, 8.G.1, 8.G.2, 8.G.4, 8.G.5, 8.G.6, 8.G.8

DOK 2, 3
DOK 2, 3, 4
DOK 2, 3
DOK 2, 3
DOK 2, 3, 4
DOK 2, 3
DOK 2, 3
1 question is represented by the targets listed in Claim 4.

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, 4
DOK 1, 2, 3
DOK 2, 3
DOK 2, 3, 4
DOK 1, 2, 3
DOK 3, 4

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