

Unit 2 Topic 3 Formative Assessment 1 – Key

Item	Type	Standard	Scoring Tool	Sample Answers/Responses
1	CR	F-IF.7d	4 — 4 correct answers 3 — 3 correct answers 2 — 2 correct answers 1 — 1 correct answer 0 — 0 correct answers	a) <i>g</i> b) <i>both</i> c) <i>both</i> d) <i>f</i>
2a	CR	F-IF.7d	1 — Correct answer 0 — Incorrect answer	3.6 hours
2b	CR	F-IF.7d	1 — Correct answer 0 — Incorrect answer	The time decreases
2c	CR	F-IF.7d	3 — Completely correct graph 2 — Mostly correct graph 1 — Minimally correct graph 0 — Incorrect answer	<p>A completely correct graph has all appropriate features (domain/range, asymptotes, shape, three correctly plotted points). A mostly correct graph may be missing one of these characteristics. A minimally correct graph will have one or two correct characteristics.</p>
3	CR	F-BF.3	3 — 3 correct answers 2 — 2 correct answers 1 — 1 correct answer 0 — 0 correct answers	a) $y = \frac{1}{x-2}$ b) $y = 3 + \frac{1}{x}$ c) $y = -\frac{1}{x}$
4a	CR	A-APR.6	2 — 2 correct transformations 1 — 1 correct transformation 0 — 0 correct transformations	The graph of $y = \frac{1}{x}$ has been translated one unit up and two units to the left.

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4b	CR	A-APR.6	2 — Student shows a completely correct computation (either combining the terms or long division). 1 — Student shows a partially correct computation. 0 — Incorrect answer	$1 + \frac{1}{x+2} = \frac{x+2+1}{x+2} = \frac{x+3}{x+2}$ <p style="text-align: center;">or</p> $x+2 \overline{)x+3} \quad \text{so} \quad \frac{x+3}{x+2} = 1 + \frac{1}{x+2}$
5	CR	A-REI.1 A-REI.2	1 — Correct answer with reason 0 — Incorrect answer	The solution is extraneous because when $x = 3$ is substituted into the original equation, it makes a denominator equal to zero.
6	CR	A-REI.1 A-REI.2	3 — Correct solution 2 — Student multiplies by the LCM or cross-multiplies and makes one computational error. 1 — Student multiplies by the LCM or cross-multiplies and makes multiple errors. 0 — Incorrect solution method	$x = 17$ $\frac{7}{x+4} = \frac{5}{x-2}$ $7(x-2) = 5(x+4)$ $7x - 14 = 5x + 20$ $2x = 34$ $x = 17$
7	CR	A-REI.1 A-REI.2	1 — Correct answer 0 — Incorrect answer	C. $x(x-1)$

Total points: 21