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| --- | --- |
| **1.** | **A student concluded that** /files/assess_files/4caf9c27-5f1b-4775-b2b8-77081db18150/bb339617-c403-4c35-9236-ae4fd27dbc80.png**has no solution. Which statement BEST describes the student’s conclusion?** |
|  |
|  | |  |  | | --- | --- | | **A.** | The conclusion is incorrect because there are two solutions to the equation. | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | The conclusion is incorrect because there is exactly one solution to the equation. | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | The conclusion is correct because the coefficient before the variable is equivalent. | |
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|  | |  |  | | --- | --- | | **D.** | The conclusion is correct because, when simplified, both sides of the equation are equivalent. | |
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| **2.** | A student solved an equation for the unknown value of *n* as 0 =0.  Which set represents all of the possible values of *n*? |
|  |
|  | |  |  | | --- | --- | | **A.** | only zero can be the solution | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | only positive numbers can be the solution | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | only negative numbers can be the solution | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | any number can be the solution | |
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| **3.** | How many solutions does the equation 4*r* + 8 = 8 + 4*r* have? |
|  |
|  | |  |  | | --- | --- | | **A.** | no solutions | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | one unique solution | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | two unique solutions | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | infinitely many solutions | |
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| **4.** | Which equation has no solution? |
|  |
|  | |  |  | | --- | --- | | **A.** | 4*x* − 9 = − 9 | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | 3*x* + 2 = 17 | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | 2*x* + 4 =2*x* + 6 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | *x* + 3*x* = 8*x* − 4*x* | |
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| **5.** | Solve the equation 2(3*x* − 4) = 8*x* − 4 − 2*x*. |
|  |
|  | |  |  | | --- | --- | | **A.** | no solution | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | infinitely many solutions | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | *x* = –1 | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | *x* = 4 | |
|  |  |
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| **6.** | Which statement correctly describes the solution(s) of the equation below?    /files/assess_files/680eaac9-83b0-4f3e-92c3-213a2ea6b29a/images/94bedc68284e558422983e0eed30e6d3.png |
|  |
|  | |  |  | | --- | --- | | **A.** | The equation has one solution, which is /files/assess_files/32dac3b2-0f0a-43a0-ac5f-b3f7fbd2e326/images/9490bbb2ba58ee659a074b8ed57c3221.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | The equation has one solution, which is /files/assess_files/2ceedfb5-4672-4ed3-91d7-5523f9d9df29/images/6976c2e031a1c0ba32f1739d9ada63f1.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | The equation has infinitely many solutions. | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | The equation has no solution. | |
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| **7.** | How many solutions does the equation /files/assess_files/246b72b3-4e46-4460-a28e-022ded7ac408/images/dcf0aa2031adf5c104708fa5d1161a24.png have? |
|  |
|  | |  |  | | --- | --- | | **A.** | no solution | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | one solution | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | two solutions | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | infinitely many solutions | |
|  |  |
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| --- | --- |
| **8.** | How many solutions does the equation  /files/assess_files/95d80c76-0b5c-4dd3-9858-01aa035af4a4/images/0fbc84c276b1569a4cdb8eac12de272c.png have? |
|  |
|  | |  |  | | --- | --- | | **A.** | no solutions | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | one solution | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | two solutions | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | infinite solutions | |
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| **9.** | How many solutions does the equation /files/assess_files/42e2b9af-d802-4f6f-aa16-9781072433ee/images/c46dd60c6659f2e86221c20ff310981d.png have? |
|  |
|  | |  |  | | --- | --- | | **A.** | no solution | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | one solution | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | two solutions | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | infinitely many solutions | |
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| **10.** | Which equation has no solution? |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/18402754-3dfd-431a-bbdd-eef88a308ad9/images/51eb86d08f5ee998583c018b322f6cc8.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/d88a4864-979b-4693-860f-b8404c6b333b/images/195f3018b97b36cb5a3e2385b53ed28b.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/36842420-8ba3-4076-9fde-b2b93fb9d226/images/a5836c3a3d0390e3b5361863398d9087.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/7f3d1c10-27f3-4b88-b890-6000ba19ea79/images/d542241014ce2a51058dfb2bb2a3f28e.png | |
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| --- | --- |
| **11.** | Which of these equations does NOT have any solutions? |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/c1107c40-a800-4dc7-9ec7-c7859a61640a/images/0fe8f5e7caa2f4667ccad503713d4bcf.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/c52d1753-27ea-4436-9c2f-afcc4709a0dd/images/773087753aa5a006adc728ba78c8b4ef.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/e2be80c9-7e05-4749-9981-4d250849b8aa/images/0afbf9b605323edd7d5c7aaf64214525.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/5dea392c-5a3e-41d7-bb6e-f2609d598fa9/images/3dc998a042161b437c1fc90741fe594c.png | |
|  |  |
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| --- | --- |
| **12.** | Which equation has infinitely many solutions? |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/2096ac9c-e44c-4a5b-89ef-7c81a871a351/images/5d42313bc740b71f131a10bdc74235b9.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/292b870b-9e80-4f59-a01a-13c0be9a1df1/images/a639ca56a384197756f8ee270dd92a9d.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/a26fdcb1-7c28-4194-8d46-1fe8e9339fb9/images/fd6324f39e2ade05bd9199af63e59a99.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/927be425-2fb1-4ab3-83cd-8b99cdc60c7e/images/38e10d6c7d6ea35f87d728f72243e79d.png | |
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| --- | --- |
| **13.** | Which equation has an infinite number of solutions? |
|  |
|  | |  |  | | --- | --- | | **A.** | /files/assess_files/c2563968-57d1-45af-8d1c-703ff7a2e639/images/e96cebee7df54af60e617892b2c1a804.png | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | /files/assess_files/0e4e1078-4596-4248-b315-894a8bd9dc04/images/4f99c05a81299fad71624c373ac229ba.png | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | /files/assess_files/9e4ac3de-a6b3-4378-acd7-a8eb8e1fd551/images/0eceb46f75ade8f8b7fda63d465c6682.png | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | /files/assess_files/4356e3ea-0357-45c5-9ebb-0ad33117aa7b/images/5f6b07e63baa3d2c400860a06fdf515e.png | |
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| **14.** | The equation/files/assess_files/f5ba636a-0ba2-4907-b7da-7c7b3f547abe/images/13d4dcaacf9bd1f3677bf962b200f3b9.png has no solution. Which step would change the given equation so that it has infinitely many solutions? |
|  |
|  | |  |  | | --- | --- | | **A.** | adding 3 to the left side of the equation | |
|  |  |
|  | |  |  | | --- | --- | | **B.** | adding 6 to the left side of the equation | |
|  |  |
|  | |  |  | | --- | --- | | **C.** | subtracting 3 from the left side of the equation | |
|  |  |
|  | |  |  | | --- | --- | | **D.** | subtracting 6 from the left side of the equation | |
|  |  |
|  |  |