**MPS8:2 Summative Scoring Guide**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ITEM# | SR | CR  | PT | GLE | OBJ | EXP | DESCRIPTOR |
| 1. | B |  | 1 | N2C | 5 | A | Use inverse operations correctly (DOK2) |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ITEM# | SR | CR  | PT | GLE | OBJ | EXP | DESCRIPTOR |
| 2. | D |  | 1 | N1C | 1 | A | Recognize and create mathematical representations of the same number (written as the product of the same factor and written using a base and an exponent).(DOK2) |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ITEM# | SR | CR  | PT | GLE | OBJ | EXP | DESCRIPTOR |
| 3. | D |  | 1 | N1C | 1 | A | Recognize and create mathematical representations of the same number (written as the product of the same factor and written using a base and an exponent).(DOK2) |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ITEM# | SR | CR  | PT | GLE | OBJ | EXP | DESCRIPTOR |
| 4. |  | X | 3 | N1C | 1 | A | Recognize and create mathematical representations of the same number (written as the product of the same factor and written using a base and an exponent). (DOK2) |

Answer: Example: 16 = (2)(2)(2)(2) = 24

3 points Exemplary response; number chosen can be written as the product of

 the same factor, same factor used, base and exponent correct.

2 points 2 of the above criteria

1 point 1 of the above criteria

0 points none of the above criteria

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ITEM# | SR | CR  | PT | GLE | OBJ | EXP | DESCRIPTOR |
| 5. | D |  | 1 | N1C | 2 | B | Change numbers from scientific notation back to standard form. (DOK2) |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ITEM# | SR | CR  | PT | GLE | OBJ | EXP | DESCRIPTOR |
| 6. | B |  | 1 | N1C | 2 | B | Change numbers from scientific notation back to standard form. (DOK2) |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ITEM# | SR | CR  | PT | GLE | OBJ | EXP | DESCRIPTOR |
| 7. | D |  | 1 | N1C | 2 | A | Change standard numbers to scientific notation. (DOK2) |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ITEM# | SR | CR  | PT | GLE | OBJ | EXP | DESCRIPTOR |
| 8. | A |  | 1 | N1C | 2 | A | Change standard numbers to scientific notation. (DOK2) |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ITEM# | SR | CR  | PT | GLE | OBJ | EXP | DESCRIPTOR |
| 9. |  | x | 3 | N1C | 2 | A | Change standard numbers to scientific notation. (DOK2) |

Example answer: 110 = 1.10 · 102

3 points Exemplary response; number chosen is between 100 and 1,000,

 2 parts of scientific notation are correct

2 points 2 of the above criteria

1 point 1 of the above criteria

0 points none of the above criteria

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ITEM# | SR | CR  | PT | GLE | OBJ | EXP | DESCRIPTOR |
| 10. |  | x | 3 | N1C | 2 | A | Change standard numbers to scientific notation. (DOK2) |

Example answer: 0.0056 = 5.6 (10-3)

3 points Exemplary response; number chosen is between 0 and 1 , 2 parts

of scientific notation are correct

2 points 2 of the above criteria

1 point 1 of the above criteria

0 points none of the above criteria

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ITEM# | SR | CR  | PT | GLE | OBJ | EXP | DESCRIPTOR |
| 11. |  | x | 2 | N1C | 2 | A | Change standard numbers to scientific notation. (DOK2) |

Answer: 4.2 ( 10-4)

2 points Exemplary response; both factors correct

1 point 1 correct factor

0 point no correct factors

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ITEM# | SR | CR  | PT | GLE | OBJ | EXP | DESCRIPTOR |
| 12. |  | x | 1 | N1C | 2 | B | Change numbers from scientific notation back to standard form. (DOK2) |

Answer: 1,750,000

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ITEM# | SR | CR  | PT | GLE | OBJ | EXP | DESCRIPTOR |
| 13. | B |  | 1 | N1A | 3 | A | Order all rational numbers, including percents, from least to greatest and greatest to least. (DOK1) |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ITEM# | SR | CR  | PT | GLE | OBJ | EXP | DESCRIPTOR |
| 14. |  | x | 3 | N1C | 1 | A | Recognize and create mathematical representations of the same number (written as the product of the same factor and written using a base and an exponent). (DOK2) |

Example answer: 64 = (4)(4)(4)= 43

3 points Exemplary response; number chosen is less than 100, same

 factor used, base and exponent correct

2 points 2 of the above criteria

1 point 1 of the above criteria

0 points none of the above criteria

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ITEM# | SR | CR  | PT | GLE | OBJ | EXP | DESCRIPTOR |
| 15. | D |  | 1 | N1B | 4 | B | Round decimals correctly. (DOK2) |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ITEM# | SR | CR  | PT | GLE | OBJ | EXP | DESCRIPTOR |
| 16. |  | x | 3 | N1B | 4 | C | Use fractions, decimals and percents to solve problems. (DOK2) |

Answer: 22/24 = 11/12 = 0.91666667 = 91.7%

3 points Exemplary response; fraction in simplest form, correct decimal,

 correct percent

2 points 2 of the above criteria

1 point 1 of the above criteria

0 point none of the above criteria

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ITEM# | SR | CR  | PT | GLE | OBJ | EXP | DESCRIPTOR |
| 17. |  | x | 3 | N1B | 4 | A | Solve problems correctly (DOK2) |

Answer: - (5/8) (-2½)(¼) = -(5/8)

3 points Exemplary response; correct answer in simplest form, correct

 substitution for multiplication problem, correct sign

2 points 2 of above criteria

1 point 1 of the above criteria

0 points none of the above criteria

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ITEM# | SR | CR  | PT | GLE | OBJ | EXP | DESCRIPTOR |
| 18. |  | x | 3 | N1B | 4 | C | Use fractions, decimals and percents to solve problems. (DOK2) |

Answer: $2,160.00

3 points Exemplary response; correct answer, added 15.50 to 8.50,

 multiplied that by 90

2 points 2 of the above criteria

1 point 1 of the above criteria

0 points none of the above criteria

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ITEM# | SR | CR  | PT | GLE | OBJ | EXP | DESCRIPTOR |
| 19. |  | x | 3 | N2C | 5 | A | Use inverse operations correctly (DOK2) |

Answer: Multiply both sides of the equation by -(3/2). This is using the multiplicative inverse of -(2/3) to create a “1” when they’re multiplied together. By multiplying -20 by -(3/2) you get your answer of 30.

3 points Exemplary response; correct answer, inverse of- (2/3) used, correct

 explanation

2 points 2 of the above criteria

1 point 1 of the above criteria

0 point : none of the above criteria

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ITEM# | SR | CR  | PT | GLE | OBJ | EXP | DESCRIPTOR |
| 20. | D |  | 1 | A2B | 6 | A | Solve algebraic equations containing rational numbers. (DOK2) |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ITEM# | SR | CR  | PT | GLE | OBJ | EXP | DESCRIPTOR |
| 21. |  | x | 3 | A2B | 6 | A | Solve algebraic equations containing rational numbers. (DOK2) |

Answer: 18 + x = 30

X = 12 inches

3 points Exemplary response; correct answer, correct work, correct equation

2 points 2 of the above criteria

1 point 1 of the above criteria

0 points none of the above criteria