# **7th Benchmark 1 Study Guide**

\*\*\*These questions are similar to the ones you will see on the benchmark. If you can solve these, you will be prepared for the benchmark!!!

**Question 1 . MGSE7.NS.2a**

Solve the following equation. $\frac{3}{8}$x = 3

**Question 2** . **MGSE7.EE.1**

Simplify -7x + 9 - 2x -4

**Question 3 . MGSE7.NS.3**

Simplify the following complex fraction.

$\frac{0.23}{0.78-\frac{1}{2}}$

**Question 4 . MGSE7.NS.1d**

Donalds checking account balance was -$42, and then he withdrew $25 more. What is his checking account balance after the withdrawal?

**Question 5 . MGSE.7.NS.1b**

Johnny and Blake are competing in a throwing competition. Johnny threw the ball 70 m from the starting platform. Blake threw the ball 10 m from the starting platform. How many times farther was the end of Johnny’s throw than the end of Blake's throw?

**Question 6 . MGSE7.EE.1**

Simplify the following expression.

(10*x* - 14*y*) + (19*x* + 28*y*)

**Question 7 . MGSE7.NS.1c**

Simplify the following expression.

(24*x* + 40*y*) - (10*x* + 15*y*)

**Question 8 . MGSE7.EE.2**

The museum is offering a special to a class of students for a field trip. The special includes a base fee of $110.00 and $7.50 per student. ***c*** represents the costs of the field trip and ***s*** represents the number of students. Write an equation that represents the situation given?

**Question 9 . MGSE7.EE.1**

Which algebraic expression is equivalent to the expression below? (Hint: use the distributive property, then combine like terms.)

6(2*x* + 7) - 12

**Question 10 . MGSE.7.NS.2d**

Change the following fraction to a decimal, then indicate whether it is a terminating or repeating decimal.

$\frac{132}{8}$

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**Question 11 .MGSE7.NS.2d**

Convert the following fraction to a decimal.

$\frac{12}{7}$

 **Question 12 . Constructed Response MSG7.EE.1**

Danielle is on a family cell phone plan with the other 3 members of her family. The family gets 324 shared cell phone minutes a month, and each family member is limited to his or her equal share of the minutes. The only free calls are calls between family members.

1. Write and solve an equation to show how many minutes Danielle can use each month.

 B) If there are 31 days in the month, how many minutes can Danielle use each day.

**Question 13 . MGSE7.EE.4a**Melanie earns $6 per hour working for her Dad. Write an equation to find out how many hours she needs to work to earn $54.00.

**Question 14 . MGSE7.EE.4a**Brad wants to buy a tablet that costs $300.00. Suppose he saves $50 a week. In how many weeks will he have enough money for the tablet (Write and solve an equation).

 **Question 15. MGSE7.EE.4a**

Look at the following equation. 6x = 36 What is the operation you would use to solve this equation?

**Question 16 . MGSE7.EE.4a & MGSE7.NS.2b**

Solve the following equation. 5x = -25

**Question 17. MGSE7.EE.1**

Solve the following equation.

x- 5 = -15

**Question 18 .MGSE7.EE.1 and MGSE7.EE.2**

A city is building a fence around a rectangular park. If the perimeter of the playground is 110 feet and the length of one side of the fence is 40 feet, what is the width of the playground? (Hint: Draw a picture! Use the picture to write and solve an equation.)

**Question 19 .MGSE7.EE.2**

A small tree was planted at a height of 5 feet. The tree grew an average of 25.1 centimeters a year. Write an expression that represents the initial height of the tree and its yearly growth?

**Question 20 . MGSE7.NS.1a**



Which of the following can be added to the number indicated on the number line above to sum to 0?

**Question 21. MGSE7.NS.1**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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What is the length of the line segment on the number line?

**Question 22 . MGSE7.NS.1d**

Indicate which property is illustrated in Step 1.

|  |  |  |  |
| --- | --- | --- | --- |
| Step 1 | 7 + (2 + 14) + 0 | = | 7 + (14 + 2) + 0 |
| Step 2 |  | = | (7 + 14) + (2 + 0) |
| Step 3 |  | = | (7 + 14) + 2 |
| Step 4 |  | = | 18 + 1 |

**Question 23 . MGSE7.NS.1d**

Indicate which property is illustrated in Step 4.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Step 1 | (-7) + 7 + 3(10 + 2) | = | (-7) + 7 + (3 • 10) + (3 • 2) |  |
| Step 2 |  | = | (-7) + 7 + (30) + (6) |  |
| Step 3 |  | = | (-7) + 7 + 36 |  |
| Step 4 |  | = | 0 + 36 |  |
| Step 5 |  | = | 36 |  |

 **Question 24 . MGSE7.EE.1**

Use properties of rational numbers to simplify the expression.

-21 - (34.07 + 12)

**Question 25 .** **MGSE7.NS.2b**

Solve the following.

2,242 ÷ -300 =

Question 26 . **MGSE7.NS.2a**

Use properties of rational numbers to multiply the following.

 $\frac{7}{12}$$×92$

Question 27 . **MGSE7.NS.2c**

Indicate which property is illustrated in Step 1.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Step 1 | 2 • 7 • 1 • 1 | = | (2 • 7) • (1 • 1) |  |
| Step 2 |  | = | (2 • 1) • (7 • 1) |  |
| Step 3 |  | = | 2 • (7 • 1) |  |
| Step 4 |  | = | 2 • 7 |  |

**Question 28 .MGSE7.NS.2c**

Indicate which property is illustrated in Step 1.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Step 1 | -5 + 5 + 8(10 + 4) | = | -5 + 5 + (8 • 10) + (8 • 4) |  |
| Step 2 |  | = | -5 + 5 + (80) + (32) |  |
| Step 3 |  | = | -5 + 5 + 112 |  |
| Step 4 |  | = | 0 + 112 |  |
| Step 5 |  | = | 112 |  |

Question 29 .**MGSE7.NS.2d**

Write the following fraction as a decimal

$\frac{8}{10}$