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Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**YOU MAY USE A CALCULATOR**

You have **45 minutes** to complete this assessment. You may write on the document.

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1. Harris took weekly measurement of the diameter s of two pumpkins in his garden throughout the summer. Pumpkin A’s growth has been recorded in the following table. Pumpkin B’s growth has been recorded on the following graph.

 **Growth of Growth of**

 **Pumpkin A Pumpkin B**

 **Weeks**

**Diameter (inches)**

|  |  |
| --- | --- |
| **Week** | **Macintosh HD:Users:teacher:Desktop:Screen Shot 2015-10-09 at 10.45.05 AM.pngDiameter (in)** |
| 0 | 0 |
| 1 | 3 |
| 2 | 6 |
| 3 | 9 |
| 4 | 12 |
| 5 | 15 |
| 6 | 18 |
| 7 | 21 |
| 8 | 24 |

 Which pumpkin grew faster? What was its rate of growth?

 a. Pumpkin A grew faster. Its rate of growth was 2 inches/week.

 b. Pumpkin B grew faster. Its rate of growth was 3 inches/week.

 c. Pumpkin A grew faster. Its rate of growth was 3 inches/week.

 d. Pumpkin B grew faster. Its rate of growth was 2 inches/week.

(8.EE.5)

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2. Jay and Tony are moving to a new apartment. They are deciding which truck to rent based on the slope of its ramp.

 Truck A: The back of the truck is three feet from the ground and the ramp is 12 feet long and

Truck B: The back of the truck is two feet from the ground and the ramp is 10 feet long and

Draw a picture of each situation and use it to compare the two ramps.

a. The slope of Truck A’s ramp is steeper.

b. The slope of Truck B’s ramp is steeper.

c. Both trucks have ramps that equally steep.

d. The slopes cannot be determined from the information given.

(8.EE.5)

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3. Look at the equations.

 I. 3 – x = 3(1 – x)

 II. 3x – 2 = x – 4

 III. 5x = 2x + 2

 IV. 10 – x = 6 – x

 Which of the equations has an infinite number of solutions?

 a. I

 b. II

 c. III

 d. IV

(8.EE.7.a.)

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4. The equation 5x = 2x + 9 can be slightly altered to produce an equation that has no solution. Which of the following equations describes that possibility?

 a. 5x – 3x = 2x + 9

 b. 5x = 2x + 9 – 9

 c. 5x = 2x + 3x + 9

 d. 5x + 0 = 2x + 9

 (8.EE.7.a.)

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5. Solve the equation.

 5.6 = -11.2 – 2x

 a. x = 2.8

 b. x = -2.8

 c. x = 8.4

 d. x = -8.4

(8.EE.7.b.)

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6. Solve the equation.

 -10(p + 8) = -260

 a. p = -18

 b. p = 18

 c. p = -34

 d. p = 34

(8.EE.7.b.)

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7. How does the graph of the line y = x differ from the graph of the line y = 2x?

 a. y = 2x is steeper than y = x.

 b. y = x is steeper than y = 2x.

 c. The y-intercept of y = 2x is 2 units lower than the y-intercept of y = x.

 d. The y-intercept of y = x is 2 units higher than the y-intercept of y = 2x.

(8.F.2)

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8. Two functions are depicted. Which has the largest y-intercept?

 Function A Function B

 a. Not enough information has been provided to answer this question.

 b. Both functions have the same y-intercept.

 c. Function A has the largest y-intercept.

 d. Function B has the largest y-intercept.

(8.F.2)

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9. A linear function is described by the points (2, 5) and (6, 9). Provide another point that lies on the straight line described.

 a. (4, 6)

 b. (4, 7)

 c. (1, 3)

 d, (7, 11)

(8.F.3)

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10. Which of the functions listed below is NOT LINEAR?

 a. y = -2x + 3

 b. 2x – y = 5

 c. 5(x – 2) = y

 d. y = x2 + 3

(8.F.3)

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11. Select the line which best represents this scenario:

 The amount of mortar you must mix increases with the number of bricks that must be laid. It takes 5 gallons of mortar to lay 100 bricks.

 Bricks and Mortar

  **A**

 **B**

 **C**

100

90

80

70

60

50

40

30

20

10

0

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  Gallons of Mortar  |  |  |  |  |  |  |  |  |  |
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|  100 200 300 400 500 600 700 800 900 1000  Bricks |  |  |  |  |  |  |  |  |  |

 a. Line A best represents this scenario.

 b. Line B best represents this scenario.

 c. Line C best represents this scenario.

 d. None of these lines represents the scenario.

(8.F.4)

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