

Name:.....

T1

Grade :8 Gen

2025/2026

# Mock Exam

1- Simplify the expression  $3^8 \cdot 3$ .

A)  $3^8$

B)  $3^9$

C)  $3^7$

D)  $9^3$

\*\*\*\*\*

2- Simplify the expression  $m^5 \cdot m^2$ .

A)  $m^3$

B)  $m^7$

C)  $m^{10}$

D)  $m^2$

\*\*\*\*\*

3- Simplify the expression  $3m^3n^2 \cdot 8mn^3$

A)  $24m^4n^5$

B)  $11m^3n^5$

C)  $24m^5n^6$

D)  $8m^4n^5$

\*\*\*\*\*

4- Simplify the expression  $9p^4 \cdot (-8p^2)$ .

A)  $72p^6$

B)  $-72p^6$

C)  $-17p^6$

D)  $72p^2$

5- Simplify  $\frac{b^{12}}{b^5}$  .

- A)  $b^5$
- B)  $b^7$
- C)  $b^{17}$
- D)  $b^6$

\*\*\*\*\*

6- A publisher sells  $10^6$  copies of a new science fiction book and  $10^3$  copies of a new mystery book. How many times as many science fiction books were sold than mystery books?

- A) 100
- B) 1000
- C) 10,000
- D) 1,000,000

\*\*\*\*\*

7- Simplify  $\frac{5^5 \cdot 6^3 \cdot 8^{10}}{5^3 \cdot 6 \cdot 8^9}$  .

- A)  $5^2 \cdot 6^2 \cdot 8$
- B) 7200
- C) Both A and B
- D) 900

\*\*\*\*\*

8- Simplify  $\frac{45x^{15}}{9x^{10}}$  .

- A)  $5x^5$
- B)  $45x^5$
- C)  $5x^{25}$
- D)  $9x^5$

9- Simplify  $\frac{a^4c^6}{a^2c}$

- A)  $a^2c^5$
- B)  $a^6c^7$
- C)  $a^2c$
- D)  $a^4c^6$

\*\*\*\*\*

10- Simplify  $(2m^5)^6$

- A)  $64m^{30}$
- B)  $12m^{11}$
- C)  $2m^{35}$
- D)  $64m^{11}$

\*\*\*\*\*

11- Simplify the expression  $(7a^5b^6)^4$ .

- A)  $2401a^{20}b^{24}$
- B)  $343a^9b^{24}$
- C)  $49a^{20}b^{24}$
- D)  $2401a^9b^{24}$

\*\*\*\*\*

12- Simplify the expression  $(-3w^3z^8)^5$ .

- A)  $-243w^{15}z^{40}$
- B)  $243w^{15}z^{40}$
- C)  $-15w^{15}z^{40}$
- D)  $-243w^8z^3$

\*\*\*\*\*

13- Simplify the expression  $(-5r^4s^{10})^4$ .

- C)  $625r^4s^{10}$
- D)  $-625r^4s^{10}$

- A)  $625r^{16}s^{40}$
- B)  $-625r^{16}s^{40}$

\*\*\*\*\*

14- Which is greater: 1,000 or  $(6^2)^3$ ?

- A) 1,000 is greater
- B)  $(6^2)^3$  is greater
- C) Both are equal
- D) Cannot determine

15- Which expression that simplify to the same expression  $(x^3y^4)^2$ .

A)  $x^6(y^4)^2$

C)  $(x^3)^2y^6$

B)  $(x^3)^3y^6$

D)  $(x^2y)^2$

\*\*\*\*\*

16- A square floor has a side length of  $7x^5y^6$  units. A square tile has a side length of  $x^2y$  units. How many tiles will it take to cover the floor?

A)  $7x^3y^3$

B)  $49x^6y^{10}$

C)  $49x^7y^7$

D)  $7x^6y^{10}$

\*\*\*\*\*

17- A cube has a side length of  $3x^6$  units. A smaller cube has a side length of  $x^2$  units. How many smaller cubes will fit in the larger cube?

A)  $27x^8$

B)  $27x^{12}$

C)  $9x^{12}$

D)  $9x^8$

\*\*\*\*\*

18- Simplify the expression  $46^0$ .

A) 0

B) 1

C) 46

D) Undefined

\*\*\*\*\*

19- Simplify the expression  $W^0$ .

A) 0

C) W

B) 1

D) Undefined

20- Express  $8^{-4}$  using a positive exponent.

A)  $8^4$

C)  $-8^4$

B)  $\frac{1}{8^4}$

D)  $-\frac{1}{8^4}$

\*\*\*\*\*

21- Express  $y^{-9}$  using a positive exponent.

A)  $y^9$

C)  $-y^9$

B)  $\frac{1}{y^9}$

D)  $-\frac{1}{y^9}$

\*\*\*\*\*

22- Express  $\frac{1}{d^6}$  using a negative exponent.

A)  $d^6$

B)  $d^{-6}$

C)  $-d^6$

D)  $-d^{-6}$

\*\*\*\*\*

23- - Express  $\frac{1}{3^6}$  using a negative exponent.

A)  $3^6$

C)  $-3^6$

B)  $3^{-6}$

D)  $-3^{-6}$

\*\*\*\*\*

24- Simplify the expression  $9^4 \cdot 9^{-6}$ .

A)  $9^{-2}$

B)  $9^2$

C)  $\frac{1}{81}$

D) Both A and C

25- Simplify the expression  $y^{-9} \cdot y^3$ .

- A)  $y^{-6}$
- B)  $\frac{1}{y^6}$
- C)  $y^6$
- D) Both A and B

\*\*\*\*\*

26- Simplify the expression .  $\frac{x^{-8}}{x^{-12}}$

- A)  $x^{-20}$
- B)  $x^4$
- C)  $x^{-4}$
- D)  $\frac{1}{x^4}$

\*\*\*\*\*

27- Simplify the expression .  $\frac{d^{-13}}{d^{-2}}$

- A)  $d^{-11}$
- B)  $\frac{1}{d^{11}}$
- C)  $d^{11}$
- D) Both A and B

\*\*\*\*\*

28- Write  $1.6 \times 10^3$  in standard form.

- A) 16
- B) 160
- C) 1600
- D) 16,000

\*\*\*\*\*

29- Write  $1.49 \times 10^{-7}$  in standard form.

- A) 0.00000149
- B) 0.000000149
- C) 0.0000149
- D) 0.0000000149

30- A calculator screen shows a number in scientific notation as  $8.3\text{E}-6$ . Write this number in standard form.

A) 0.000083

C) 0.00000083

B) 0.0000083

D) 0.000000083

\*\*\*\*\*

31- A calculator screen shows a number in scientific notation as  $7\text{E}11$ . Write this number in standard form.

A) 70,000,000,000

C) 7,000,000,000,000

B) 700,000,000,000

D) 700,000,000

\*\*\*\*\*

32- Write 2,204,000,000 in scientific notation.

A)  $2.204 \times 10^8$

C)  $22.04 \times 10^8$

B)  $2.204 \times 10^9$

D)  $2.204 \times 10^{10}$

\*\*\*\*\*

33- Write 0.0000000642 in scientific notation.

A)  $6.42 \times 10^{-6}$

C)  $6.42 \times 10^{-8}$

B)  $6.42 \times 10^{-7}$

D)  $0.642 \times 10^{-7}$

34- Write  $-\frac{11}{16}$  in decimal form. Then determine whether the decimal is a terminating decimal.

- A)  $-0.6875$ , terminating
- B)  $-0.6875$ , non-terminating
- C)  $-0.68$ , terminating
- D)  $-0.68$ , non-terminating

\*\*\*\*\*

35- Write  $\frac{5}{33}$  in decimal form. Then determine whether the decimal is a terminating decimal.

- A)  $0.1515\dots$ , terminating
- B)  $0.1515\dots$ , non-terminating
- C)  $0.15$ , terminating
- D)  $0.15$ , non-terminating

\*\*\*\*\*

36- Write  $4\frac{3}{8}$  in decimal form. Then determine whether the decimal is a terminating decimal.

- |                              |                             |
|------------------------------|-----------------------------|
| A) $4.375$ , terminating     | C) $4.37$ , terminating     |
| B) $4.375$ , non-terminating | D) $4.37$ , non-terminating |

\*\*\*\*\*

37- Write  $-9\frac{11}{30}$  in decimal form. Then determine whether the decimal is a terminating decimal.

- |                                     |                              |
|-------------------------------------|------------------------------|
| A) $-9.3666\dots$ , terminating     | C) $-9.36$ , terminating     |
| B) $-9.3666\dots$ , non-terminating | D) $-9.36$ , non-terminating |

38- Write  $0.\overline{8}$  as a fraction or mixed number in simplest form.

A)  $\frac{4}{5}$

C)  $\frac{7}{8}$

B)  $\frac{8}{9}$

D)  $\frac{5}{6}$

\*\*\*\*\*

39- Write  $-0.\overline{18}$  as a fraction or mixed number in simplest form.

A)  $-\frac{2}{11}$

C)  $-\frac{2}{9}$

B)  $-\frac{1}{5}$

D)  $-\frac{1}{6}$

\*\*\*\*\*

40- Write  $-1.\overline{5}$  as a fraction or mixed number in simplest form.

A)  $-\frac{14}{9}$

C) Both A and B

B)  $-1\frac{5}{9}$

D)  $-\frac{15}{9}$

\*\*\*\*\*

41- Write  $4.\overline{45}$  as a fraction or mixed number in simplest form.

A)  $4\frac{5}{11}$

C) Both A and B

B)  $\frac{49}{11}$

D)  $\frac{50}{11}$

\*\*\*\*\*

42- Simplify  $\sqrt{361}$ .

A) 18

C) 20

B) 19

D) 21

43- Simplify  $-\sqrt{\frac{9}{16}}$ .

- A)  $\frac{3}{4}$  C)  $-\frac{9}{16}$   
B)  $-\frac{3}{4}$  D)  $\frac{9}{16}$

\*\*\*\*\*

44- Simplify  $\sqrt{-441}$ .

- A) 21 C) 21**1**  
B) -21 D) Cannot be simplified

\*\*\*\*\*

45- Solve  $m^2 = 0.04$ .

- A)  $m = 0.2$  C)  $m = \pm 0.2$   
B)  $m = -0.2$  D)  $m = 0.04$

\*\*\*\*\*

46- Simplify  $\sqrt[3]{343}$ .

- A) 6 C) 8  
B) 7 D) 9

\*\*\*\*\*

47- Simplify  $\sqrt[3]{-512}$ .

- A) 8 C) 512  
B) -8 D) -512

47- A basin of a water fountain is cube shaped and has a volume of 91.125 cubic feet. Solve  $s^3 = 91.125$  to find the length  $s$  of one side of the basin.

- A) 3 feet
- B) 4 feet
- C) 4.5 feet
- D) 5 feet

\*\*\*\*\*

48-Moesha has 196 pepper plants that she wants to plant in a square formation. How many pepper plants should she plant in each row?

- A) 12
- B) 13
- C) 14
- D) 15

\*\*\*\*\*

49- What is the value of  $p$  in the equation shown?  $p^3 = -0.027$

- A) 0.3
- B) -0.3
- C) 0.027
- D) -0.027

\*\*\*\*\*

50- Estimate  $\sqrt{125}$  to the nearest integer.

- A) 10
- B) 11
- C) 12
- D) 13

\*\*\*\*\*

51- Estimate  $\sqrt{55}$  to the nearest integer.

- A) 6
- B) 7
- C) 8
- D) 9

52- Estimate  $\sqrt[3]{70}$  to the nearest integer.

A) 3

C) 5

B) 4

D) 6

\*\*\*\*\*

53- Estimate  $\sqrt[3]{923}$  to the nearest integer.

A) 9

C) 11

B) 10

D) 12

\*\*\*\*\*

54- Estimate  $\sqrt{296}$  to the nearest tenth.

A) 17.0

C) 17.2

B) 17.1

D) 17.3

\*\*\*\*\*

55- Estimate  $\sqrt{5}$  to the nearest tenth.

A) 2.1

C) 2.3

B) 2.2

D) 2.4

\*\*\*\*\*

56- Estimate  $\sqrt{11}$  to the nearest tenth.

A) 3.2

C) 3.4

B) 3.3

D) 3.5

\*\*\*\*\*

57- Estimate  $\sqrt{62}$  to the nearest tenth.

A) 7.8

B) 7.9

C) 8.0

D) 8.1

58- Complete the statement using  $<$ ,  $>$ , or  $=$ .  $\sqrt{11}$  \_\_\_\_\_  $3\frac{2}{3}$

A)  $\sqrt{11} < 3\frac{2}{3}$

C)  $\sqrt{11} = 3\frac{2}{3}$

B)  $\sqrt{11} > 3\frac{2}{3}$

D) Cannot determine

\*\*\*\*\*

59- Complete the statement using  $<$ ,  $>$ , or  $=$ .  $\sqrt{3}$  \_\_\_\_\_  $\frac{\sqrt{10}}{2}$

A)  $\sqrt{3} < \frac{\sqrt{10}}{2}$

C)  $\sqrt{3} = \frac{\sqrt{10}}{2}$

B)  $\sqrt{3} > \frac{\sqrt{10}}{2}$

D) Cannot determine

\*\*\*\*\*

60- Complete the statement using  $<$ ,  $>$ , or  $=$ .  $-\pi^2$  \_\_\_\_\_  $-\sqrt{93}$

A)  $-\sqrt{93} < -\pi^2$

C)  $-\sqrt{93} = -\pi^2$

B)  $-\sqrt{93} > -\pi^2$

D) Cannot determine

\*\*\*\*\*

61- Complete the statement using  $<$ ,  $>$ , or  $=$ .  $-\sqrt{12}$  \_\_\_\_\_  $-320\%$

A)  $-\sqrt{12} < -320\%$

C)  $-\sqrt{12} = -320\%$

B)  $-\sqrt{12} > -320\%$

D) Cannot determine

\*\*\*\*\*

62 -Order the set  $\left\{3\frac{1}{2}, \frac{10}{3}, \pi, \sqrt{13}\right\}$  from least to greatest.

A)  $\pi, \frac{10}{3}, 3\frac{1}{2}, \sqrt{13}$

C)  $\pi, 3\frac{1}{2}, \frac{10}{3}, \sqrt{13}$

B)  $\frac{10}{3}, \pi, 3\frac{1}{2}, \sqrt{13}$

D)  $\sqrt{13}, 3\frac{1}{2}, \pi, \frac{10}{3}$

63 -The table shows the foul-shot statistics for three players in a recent basketball game. Which player had the greatest foul-shot statistic?

| Player | Foul-Shot Statistic |
|--------|---------------------|
| 1      | $\frac{7}{9}$       |
| 2      | 72%                 |
| 3      | 8 out of 10         |

- A) Player 1  
 B) Player 2  
 C) Player 3  
 D) All are equal

\*\*\*\*\*

64 -Complete the statement using  $<$ ,  $>$ , or  $=$  to make a true statement.

$$\sqrt{27} \text{ _____ } \frac{\sqrt{95}}{2}$$

- A)  $\sqrt{27} < \frac{\sqrt{95}}{2}$   
 B)  $\sqrt{27} > \frac{\sqrt{95}}{2}$   
 C)  $\sqrt{27} = \frac{\sqrt{95}}{2}$   
 D) Cannot determine

\*\*\*\*\*

65- Marko has 45 comic books in his collection, and Tamara has 61 comic books. Marko buys 4 new comic books each month and Tamara buys 2 comic books each month. After how many months will Marko and Tamara have the same number of comic books? Write and solve an equation to represent this problem.

- A)  $x = 6$   
 B)  $x = 7$   
 C)  $x = 8$   
 D)  $x = 9$

66- A fish tank has 150 gallons of water and is being drained at a rate of  $\frac{1}{2}$  gallon each second. A second fish tank has 120 gallons of water and is being filled at a rate of  $\frac{1}{4}$  gallon each second. After how many seconds will the two fish tanks have the same amount of water? Write and solve an equation to represent this problem.

A)  $150 - \frac{1}{2}t = 120 + \frac{1}{4}t$

A) 30 seconds

B)  $150 + \frac{1}{2}t = 120 - \frac{1}{4}t$

B) 40 seconds

C)  $150 - \frac{1}{4}t = 120 + \frac{1}{2}t$

C) 50 seconds

D)  $150 + \frac{1}{4}t = 120 + \frac{1}{2}t$

D) 60 seconds

\*\*\*\*\*

67-Shipping Company A charges \$14 plus \$2.25 a pound to ship overnight packages. Shipping Company B charges \$20 plus \$1.50 a pound to ship an overnight package. For what weight is the charge the same for the two companies? Write and solve an equation to represent this problem.

A)  $14 + 2.25w = 20 + 1.50w$

A) 6 pounds

B)  $14 + 1.50w = 20 + 2.25w$

B) 7 pounds

C)  $20 + 2.25w = 14 + 1.50w$

C) 8 pounds

D)  $14 + 2.25w = 20 + 2.25w$

D) 9 pounds

68- A bicycle rental company charges a \$20 fee plus \$5.50 per hour to rent a bicycle. Another bicycle rental company charges a \$15 fee plus \$6.50 per hour to rent a bicycle. For what number of hours is the cost for the rental the same? Write and solve an equation to represent this problem.

- |                              |            |
|------------------------------|------------|
| A) $20 + 5.50h = 15 + 6.50h$ | A) 4 hours |
| B) $20 + 6.50h = 15 + 5.50h$ | B) 5 hours |
| C) $15 + 5.50h = 20 + 6.50h$ | C) 6 hours |
| D) $20 + 5.50h = 15 + 5.50h$ | D) 7 hours |

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69- Solve  $-g + 2(3 + g) = -4(g + 1)$ .

- |       |      |
|-------|------|
| A) -3 | C) 2 |
| B) -2 | D) 3 |

\*\*\*\*\*

70- Solve  $-8 - x = -3(2x - 4) + 3x$ .

- |       |        |
|-------|--------|
| A) 8  | C) -10 |
| B) 10 | D) -8  |

\*\*\*\*\*

71- Solve  $0.6(4 - 2x) = 20.5 - (3x + 10)$ .

- |        |        |
|--------|--------|
| A) 4   | C) 5   |
| B) 4.5 | D) 3.5 |

\*\*\*\*\*

72- Solve  $12 - (4y + 8) = 0.5(8y - 16)$ .

A) 1

C) 2

B) 1.5

D) 2.5

\*\*\*\*\*

73- Solve  $\frac{1}{2}(-4 + 6n) = \frac{1}{3}n + \frac{2}{3}(n + 9)$ .

A) 3

C) 5

B) 4

D) 6

\*\*\*\*\*

73- Solve  $\frac{1}{5}(5x - 5) + 3x = -9(\frac{1}{3}x + 4)$ .

A)  $x = 5$

C)  $x = 7$

B)  $x = -5$

D)  $x = -7$

\*\*\*\*\*

74- Mr. Reed is drawing a blueprint of a rectangular patio. The width of the patio is  $40\frac{3}{4}$  feet shorter than twice its

length. The perimeter of the patio is  $86\frac{1}{2}$  feet. What is the length of the patio?

A) 24 ft

C) 28 ft

B) 26 ft

D) 30 ft

75- The Yearbook Club is going to an amusement park, and each of their 12 members will pay for admission and will also help pay for parking.

The Robotics Club is going to a waterpark, and each of their 14 members will pay for admission and will also purchase a meal ticket. Admission to the amusement park is 1.5 times that of the waterpark's admission, as shown in the table.

If the total cost is the same at both the amusement park and the waterpark, what is the admission per student to the waterpark? Write and solve an equation.

| Amusement Part                  | Waterpark                          |
|---------------------------------|------------------------------------|
| Admission: $\$1.5x$ per student | Admission: $\$x$ per student       |
| Parking: $\$2$ per student      | Meal Ticket: $\$10.50$ per student |

A)  $\$28.50$

C)  $\$32.50$

B)  $\$30.75$

D)  $\$35.00$

\*\*\*\*\*

76- Solve  $4(x - 8) + 12 = 2(2x - 9)$ . Determine whether the equation has one solution, no solution, or infinitely many solutions.

A) One solution

B) No solution

D)  $x = 10$

C) Infinitely many solutions

77- Arjun purchased 5 tickets to a play, each with the same price. He was also charged an online service fee of \$3.50 per ticket. Emilia purchased 3 tickets to the same play and paid twice as much for her tickets as Arjun. Emilia was also charged a service fee of \$2.75 per ticket. If they spent the same amount, what is the cost of each of the tickets Arjun purchased? Let  $t$  represent the cost of each of Arjun's tickets.

- |           |            |
|-----------|------------|
| A) \$7.25 | C) \$9.25  |
| B) \$8.50 | D) \$10.00 |

\*\*\*\*\*

78- Solve  $3(2k - 5) = 6(k - 4) + 9$ . Determine whether the equation has one solution, no solution, or infinitely many solutions.

- |                              |                |             |
|------------------------------|----------------|-------------|
| A) One solution              | B) No solution | D) $x = 10$ |
| C) Infinitely many solutions |                |             |

\*\*\*\*\*

79- Solve  $-4y - 3 = \frac{1}{3}(12y - 9) - 8y$ . Determine whether the equation has one solution, no solution, or infinitely many solutions.

- |                              |                |             |
|------------------------------|----------------|-------------|
| A) One solution              | B) No solution | D) $x = 10$ |
| C) Infinitely many solutions |                |             |

80- Solve  $6(3 - 5w) = 5(4 - 2w) - 20w$ . Determine whether the equation has one solution, no solution, or infinitely many solutions.

A) One solution

B) No solution

D)  $X = 10$

C) Infinitely many solutions

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81- Complete the equation so that it has infinitely many solutions.

$$2x - 7(x + 10) = \underline{\hspace{1cm}} x - \underline{\hspace{1cm}}$$

A)  $-5x - 70$

C)  $5x - 70$

B)  $-5x + 70$

D)  $5x + 70$

\*\*\*\*\*

82- Complete the equation so that it has infinitely many solutions.

$$12x - x + 8 + 3x = \underline{\hspace{1cm}} x + \underline{\hspace{1cm}}$$

A)  $14x + 8$

C)  $-14x + 8$

B)  $14x - 8$

D)  $-14x - 8$

\*\*\*\*\*

83- Complete the equation so that it has no solution.

$$-15x + 4x + 2 - x = \underline{\hspace{1cm}} x + \underline{\hspace{1cm}}$$

A)  $-12x + 2$

C)  $12x - 2$

B)  $-12x + 5$

D)  $12x + 2$

84- Complete the equation so that it has no solution.

$$9(x - 4) - 5x = \underline{\hspace{1cm}}x - \underline{\hspace{1cm}}$$

A)  $4x - 36$

C)  $3x - 36$

B)  $4x - 35$

D)  $-4x - 36$

\*\*\*\*\*

85- **Multiple Choice** Which of the following explains why

$$\frac{2}{3}(x + 3) = \frac{2}{3}(x - 6) \text{ has no solution?}$$

A The coefficients are different, and the constants are different.

B The coefficients are the same, and the constants are the same.

C The coefficients are different, and the constants are the same.

D The coefficients are the same, and the constants are different

\*\*\*\*\*

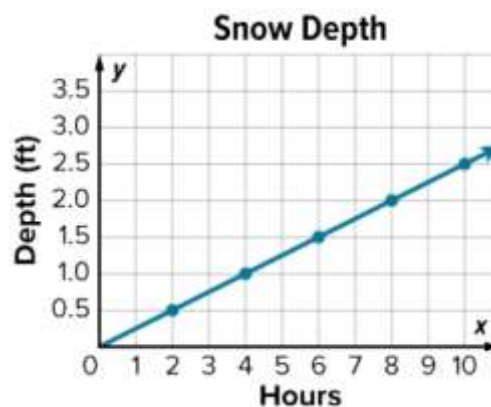
86- The graph shows the depth in feet of snow after each two-hour period during a snowstorm. Find the slope of the line.

A) 1

B)  $\frac{1}{4}$

D)  $-\frac{1}{4}$

C) 2



87- The graph shows the amount of money left after buying video games. Find the slope of the line.



- A) 20                      B) -20  
C) 30                      C) -10

\*\*\*\*\*

88- The points given in the table lie on a line. Find the slope of the line.

|   |    |    |    |    |
|---|----|----|----|----|
| x | -1 | 2  | 5  | 8  |
| y | 3  | -1 | -5 | -9 |

- A)  $\frac{3}{4}$                       B)  $\frac{4}{3}$   
C)  $-\frac{4}{3}$                       D)  $-\frac{3}{4}$

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89- Find the slope of the line that passes points  $M(3, 5)$  and  $N(2, 6)$ .

- A) 1                              C) 2  
B) -1                            D) -2

\*\*\*\*\*

90- Find the slope of the line that passes points  $G(-3, 2)$  and  $H(7, 2)$ .

- A) 0                              C) -1  
B) 1                              D) Undefined

91- Find the slope of the line that passes points  $E(6, 8)$  and  $F(6, -2)$ .

A) 0

C) Undefined

B) 1

D) -10

\*\*\*\*\*

92- The points given in each table lie on lines. Which table, when graphed, would show a negative slope?

A

|   |    |    |   |    |
|---|----|----|---|----|
| x | -2 | 3  | 8 | 13 |
| y | -2 | -1 | 0 | 1  |

C

|   |   |   |    |     |
|---|---|---|----|-----|
| x | 3 | 5 | 6  | 8   |
| y | 8 | 0 | -4 | -12 |

B

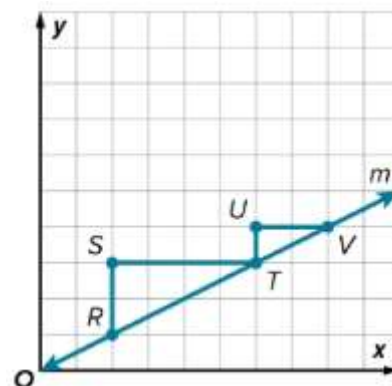
|   |    |   |   |   |
|---|----|---|---|---|
| x | -1 | 1 | 3 | 5 |
| y | -2 | 0 | 2 | 4 |

D

|   |     |    |    |    |
|---|-----|----|----|----|
| x | -13 | -9 | -5 | -1 |
| y | -4  | -2 | 0  | 2  |

\*\*\*\*\*

93- The graph of line  $m$  is shown. Use the similar slope triangles to compare the slope of segment  $RT$  and  $TV$ .



A) The slope of segment  $RT$  is greater than The slope of segment  $TV$ .

B) The slope of segment  $RT$  is smaller than The slope of segment  $TV$ .

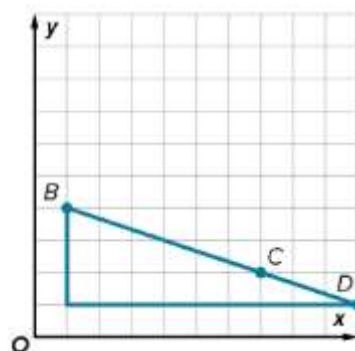
C) The slope of segment  $RT$  is equal to The slope of segment  $TV$ .

D) The slope of segment  $RT$  and  $TV$  is negative .

94- The plans for a zipline are shown. Use two points to determine the slope of the zipline. Then verify that the slope is the same by choosing a different set of points.

Slope is :

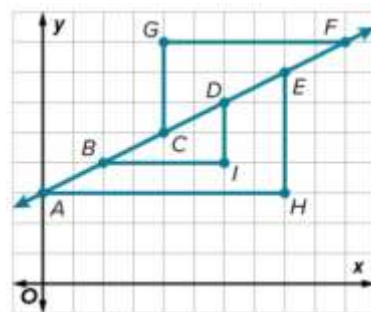
- A.  $\frac{1}{3}$                       C. 3  
B.  $-\frac{1}{3}$                       D.  $-3$



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95- Name the slope triangles shown in the graph. What is the slope of the line?

- A.  $-\frac{1}{2}$                       C. 2  
B.  $\frac{1}{2}$                       D.  $-2$

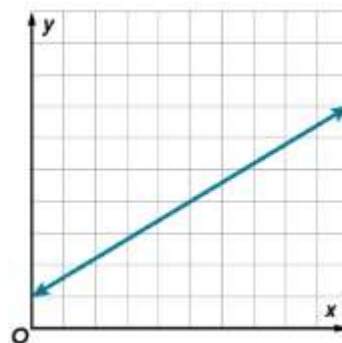


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96- Draw two slope triangles on the line. Determine the slope of the line.

Slope =

- A.  $\frac{3}{5}$                       C.  $-\frac{3}{5}$   
B.  $\frac{5}{3}$                       D.  $-\frac{5}{3}$

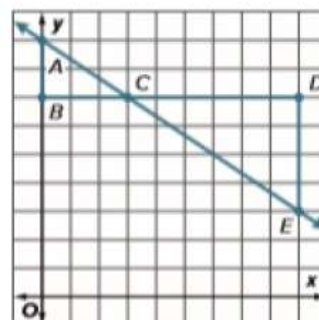


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97- Identify the slope and y-intercept of the graph of the equation  $y = 3x - 1$ .

- A.  $m = 3, b = -1$                       C.  $m = \frac{1}{3}, b = -1$   
B.  $m = -3, b = 1$                       D.  $m = -\frac{1}{3}, b = 1$

98- **Multiselect** The graph shows similar slope triangles on a line.  
Select all of the statements that are true.



- A) The slope of the line is negative.
- B) The slopes of each triangle are the same because they lie on the same line.
- C) Triangle CDE has a greater slope because the triangle is larger.
- D) The slope of each triangle is .
- F) The slope of the line is positive.

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99- Identify the slope and y-intercept of the graph of the equation  
 $y = \frac{1}{2}x - 5$ .

- |                              |                    |
|------------------------------|--------------------|
| A. $m = \frac{1}{2}, b = -5$ | C. $m = 2, b = -5$ |
| B. $m = -\frac{1}{2}, b = 5$ | D. $m = -2, b = 5$ |

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100- Write the equation of a line in slope-intercept form with a slope of  $-\frac{1}{3}$  and a y-intercept of 4.

- |                            |                            |
|----------------------------|----------------------------|
| A. $y = -\frac{1}{3}x + 4$ | C. $y = -\frac{1}{3}x - 4$ |
| B. $y = \frac{1}{3}x + 4$  | D. $y = \frac{1}{3}x - 4$  |

101- Write the equation of a line in slope-intercept form with a slope of  $\frac{3}{2}$  and a y-intercept of -3.

A.  $y = \frac{3}{2}x - 3$

C.  $y = \frac{3}{2}x + 3$

B.  $y = -\frac{3}{2}x - 3$

D.  $y = -\frac{3}{2}x + 3$

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102- Write the equation of a line in slope-intercept form with a slope of 4 and a y-intercept of -2.

A.  $y = 4x - 2$

C.  $y = 4x + 2$

B.  $y = -4x - 2$

D.  $y = -4x + 2$

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103-

103- Write the equation of a line in slope-intercept form with a slope of -1 and a y-intercept of 6.

A.  $y = -x + 6$

C.  $y = -x - 6$

B.  $y = x + 6$

D.  $y = x - 6$

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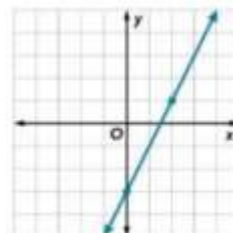
104- Write an equation in slope-intercept form for the graph shown.

A.  $y = 2x - 3$

C.  $y = -2x - 3$

B.  $y = 2x + 3$

D.  $y = -2x + 3$



105- The Augello family is driving from Columbus to St. Louis at a constant rate of 65 miles per hour. The distance between the two cities is 420 miles. Write an equation in slope-intercept form to represent the distance  $y$  in miles remaining after driving  $x$  hours.

A.  $y = 420 - 65x$

C.  $y = 65x - 420$

B.  $y = 420 + 65x$

D.  $y = -420x + 65$

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106- The table shows the costs for art show participants, including the \$30 registration fee. Write an equation in slope -intercept form that represents the data in the table.

| Number of Pieces of Art | Cost (\$) |
|-------------------------|-----------|
| 0                       | 30        |
| 2                       | 90        |
| 4                       | 150       |
| 6                       | 210       |
| 8                       | 270       |

A.  $y = 30x + 30$

C.  $y = -30x + 30$

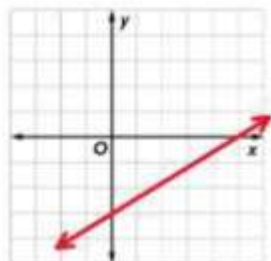
B.  $y = 30x - 30$

D.  $y = -30x - 30$

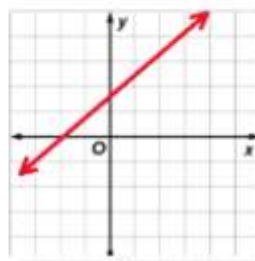
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107- Graph  $y = \frac{3}{5}x - 3$  using the slope and y-intercept.

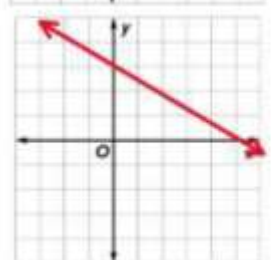
A)



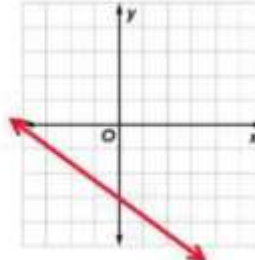
B)



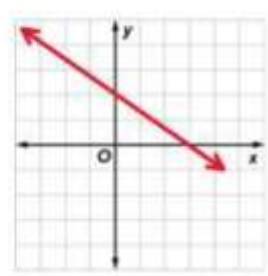
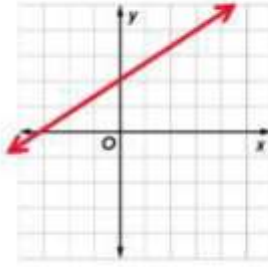
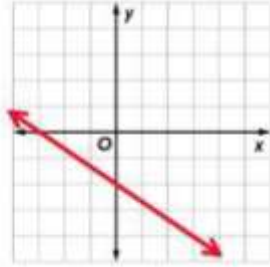
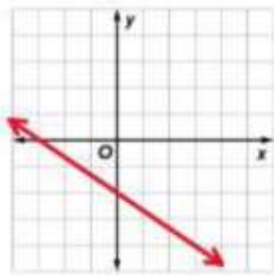
C)



D)

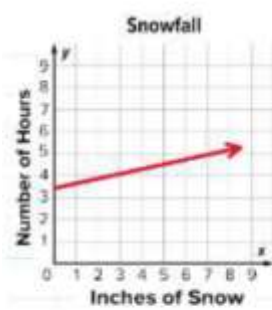


108- Graph  $y = \frac{-2}{3}x - 2$  using the slope and y-intercept.



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109- The equation  $y = \frac{1}{5}x + 3.5$  can be used to find the amount of accumulated snow  $y$  in inches  $x$  hours after 5 P.M. on a certain day. Graph this equation.



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110- Alliyah's gift card balance can be represented by the equation  $y = -5x + 50$ , where  $y$  represents the gift card balance after  $x$  number of days. Graph this equation.

