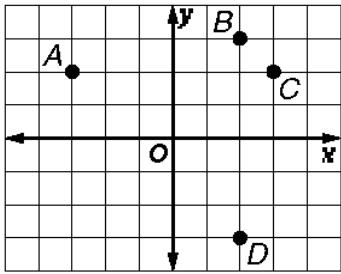


Summer Prep for Pre-Algebra 7th Grade

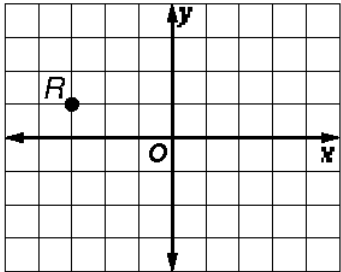
Multiple Choice Questions:

- An American robin is about 10 inches long, has a wingspan of 17 inches, and weighs k grams. What is the mass of the robin if $k = 77$?
A) k g
B) 10 g
C) 17 g
D) 77 g
- A theater charges s dollars per student ticket. What does s stand for?
A) the number of students who buy tickets
B) the dollar amount the theater charges for student tickets
C) the dollar amount students have to spend at the theater
D) the number of student tickets the theater plans to sell
- A ferry that crosses Lake Michigan 4 times per day carries p cars per trip. If $p = 28$ on the first trip of the day, how many cars are on the ferry?
A) 4 cars
B) 7 cars
C) 28 cars
D) p cars
- Which is an equation?
A) $4y - 2 = 38$
B) $3b + 8$
C) $\frac{2b + 4}{12}$
D) $\frac{r}{6} - 2$
- Ms. Tarran paid d dollars for 4 calendars. If each calendar cost the same amount, which expression represents the cost per calendar?
A) $4d$
B) $4 + d$
C) $d \div 4$
D) $d - 4$
- Dana rented camping gear for a trip to Sleeping Bear Dunes National Lakeshore. The gear costs \$20 plus \$15 per day. Which expression represents the cost of the camping gear if Dana camps for d days?
A) $20 - 15d$
B) $15d - 20$
C) $20 + 15d$
D) $15(20 + d)$
- Brittany collects postcards on trips to state capitals. She divided her postcard collection into 2 piles to arrange in albums. She filled each album with 12 cards. Solve the equation $\frac{p}{2} = 12$ to find the number of postcards p Brittany has in her collection.
A) $p = 6$
B) $p = 10$
C) $p = 14$
D) $p = 24$
- Tyrell hiked for m miles and then stopped to eat lunch. After eating lunch, he hiked 2 more miles. In all, he hiked 10 miles. Solve the equation $m + 2 = 10$ for m to find the number of miles Tyrell hiked before stopping for lunch.
A) $m = 5$
B) $m = 8$
C) $m = 9$
D) $m = 10$
- Mrs. Chen bought 20 yards of fabric to make 5 identical skirts. Solve the equation $5y = 20$, where y stands for yards, to find the number of yards of fabric used in each skirt.
A) 3 yards
C) 5 yards



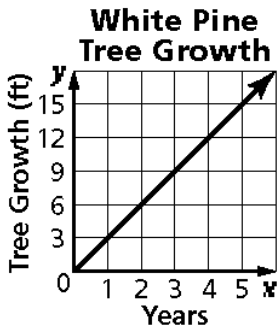
- A) A
B) B
C) C
D) D

17. Which ordered pair is located at point R?



- A) (-3, 1)
B) (-1, -3)
C) (-1, 3)
D) (1, -3)

18. The graph shows the average growth of a white pine tree. Which describes the relationship between tree growth and the time taken in years?



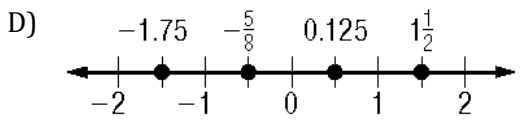
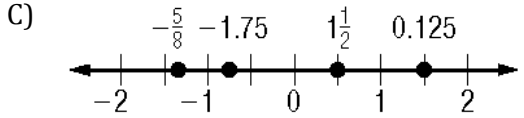
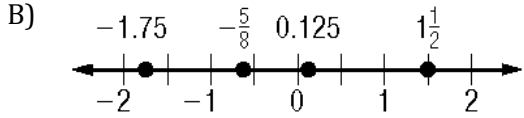
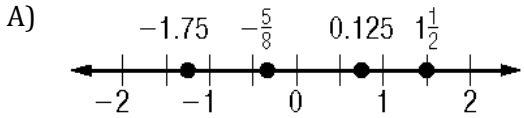
- A) The tree grows 1 feet per year.
B) The tree grows 3 feet per year.
C) The tree grows 2 feet per year.
D) The tree grows 6 feet per year.

19. The table shows the cost to make photocopies at the post office. What is the relationship between the number of photocopies and the cost?

Photocopies	
Number	Cost
2	\$0.20
4	\$0.40
6	\$0.60
8	\$0.80

- A) Photocopies cost 10¢ each.
B) Photocopies cost 20¢ each.
C) Photocopies cost 30¢ each.
D) Photocopies cost 40¢ each.

20. Sarah ordered the numbers -1.75 , $1\frac{1}{2}$, 0.125 , and $-\frac{5}{8}$ and placed them on the number line. Which number line is graphed correctly?



21. Which is an equation?

A) $2x + 12$

B) $15g$

C) $a - 2 = 5$

D) $m \approx 2$

22. Which is a list of all integers from -1 to 1 ?

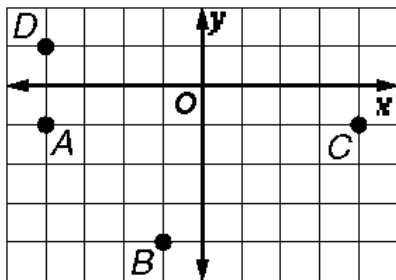
A) $-1, 1$

B) $-1, -\frac{1}{2}, \frac{1}{2}, 1$

C) $-1, -\frac{1}{2}, 0, \frac{1}{2}, 1$

D) $-1, 0, 1$

23. Which point is located at $(-4, -1)$?



A) A

B) B

C) C

D) D

24. What is the solution of $2x + 4 = 16$?

A) 20

B) 12

C) 10

D) 6

25. Randy rode his horse $4\frac{3}{4}$ hours on Monday, $2\frac{1}{3}$ hours on Tuesday, and $3\frac{1}{2}$ hours on Wednesday. About how many more hours did Randy ride his horse on Monday and Tuesday than on Wednesday?

A) less than 2 hours

B) between 2 and 3 hours

C) between 3 and 4 hours

D) more than 4 hours

- A) the positive distance from 0 on a number line, which is 7
- B) the negative distance from 0 on a number line, which is -7
- C) the negative distance from 7 on a number line, which is -7
- D) the negative distance from 7 on a number line, which is -14

43. Which shows the division of fractions as the inverse of multiplication?

- A) $\frac{2}{3} \div \frac{1}{4} = \frac{2}{3} \times \frac{1}{4}$
- B) $\frac{2}{3} \div \frac{1}{4} = \frac{2}{3} \times \frac{4}{1}$
- C) $\frac{2}{3} \div \frac{1}{4} = \frac{3}{2} \times \frac{1}{4}$
- D) $\frac{2}{3} \div \frac{1}{4} = \frac{3}{2} \times \frac{4}{1}$

44. Which shows the correct use of multiplication as the inverse of the division of two fractions?

- A) $\frac{2}{5} \div \frac{2}{3} = \frac{2}{5} \times \frac{3}{2} = \frac{6}{10}$ or $\frac{3}{5}$
- B) $\frac{2}{5} \div \frac{2}{3} = \frac{2}{5} \times \frac{2}{3} = \frac{4}{15}$
- C) $\frac{2}{5} \div \frac{2}{3} = \frac{5}{2} \times \frac{2}{3} = \frac{10}{6}$ or $1\frac{2}{3}$
- D) $\frac{2}{5} \div \frac{2}{3} = \frac{5}{2} \times \frac{3}{2} = \frac{15}{4}$ or $3\frac{3}{4}$

45. Find the value of the unknown in $\frac{2}{3} \div \square = \frac{1}{3}$.

- A) $\frac{2}{3}$
- B) $\frac{3}{2}$
- C) 2
- D) 3

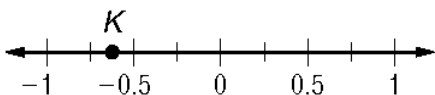
46. What is the missing number in the equation $\frac{4}{5} \div \square = 2$?

- A) 5
- B) $\frac{5}{2}$
- C) 2
- D) $\frac{2}{5}$

47. Mr. Thompson is cutting a 14-inch pepperoni stick into slices that are $\frac{1}{8}$ inch thick. Which mathematical statement can he use to find the number of slices he will have?

- A) $\frac{1}{8} \div \square = 14$
- B) $\square \div \frac{1}{8} = 14$
- C) $\frac{1}{8} \div 14 = \square$
- D) $14 \div \frac{1}{8} = \square$

48. Which could be point K on the number line?



- A) -1.75 .
- B) $-\frac{5}{8}$
- C) $-\frac{2}{5}$
- D) 0.6

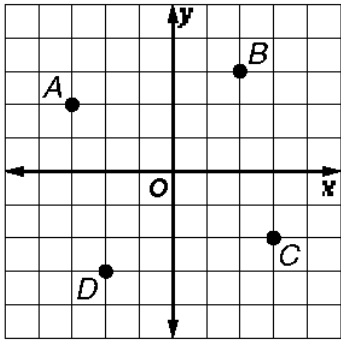
49. Abrams Planetarium at Michigan State University is hosting a show for m students in the sixth grade. What does the variable m stand for?

- A) the number of seats in the planetarium
- B) the number of student tickets
- C) male students
- D) the number of sixth grade students

50. Which equation has the same solution as $4x = 16$?

- A) $4x \div 2 = 16 \div 2$
- B) $4x \div 2 = 16 \div 4$
- C) $4x \div 4 = 16 \div 16$
- D) $4x \div 2 = 16 \div 8$

51. Which point is located at $(-2, -3)$?



- A) A
- B) B
- C) C
- D) D

52. Caitlin and Eduardo recorded the rainfall at school for a science project. How much more rainfall was recorded for Thursday and Friday, than for Monday, Tuesday, and Wednesday?

Rainfall Record	
Day	Amount
Monday	0.25 cm
Tuesday	0.10 cm
Wednesday	0.02 cm
Thursday	0.35 cm
Friday	0.05 cm

- A) 0.03 cm
- B) 0.12 cm
- C) 0.15 cm
- D) 0.3 cm

53. Which statement about integers is true?

- A) 0 is a positive integer.
- B) 0 is a negative integer.
- C) 0 is an integer that is neither negative nor positive.
- D) 0 is not an integer.

54. Francesca is working at an archeological dig. She started the dig at an elevation of +9 feet, above ground level. She ended the dig at -2 feet, below ground level. What is the difference between these two elevations?

- A) 11 ft
- B) 7 ft
- C) -7 ft
- D) -11 ft

55. Which is an expression?

- A) $5x - 1 = 11$
- B) $2a = 4$
- C) $\frac{3}{5}x + 24$
- D) $7 + 3 = p$

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Answer Section

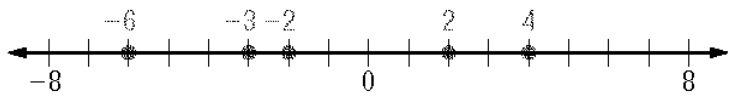
MULTIPLE CHOICE

1. D
2. B
3. C
4. A
5. C
6. C
7. D
8. B
9. B
10. D
11. C
12. A
13. C
14. C
15. B
16. B
17. A
18. B
19. A
20. B
21. C
22. D
23. A
24. D
25. C
26. B
27. B
28. C
29. A
30. C
31. B
32. A
33. C
34. A
35. B
36. A
37. C
38. B
39. D
40. B
41. C
42. A
43. B
44. A
45. C

- 46. D
- 47. D
- 48. B
- 49. D
- 50. A
- 51. D
- 52. A
- 53. C
- 54. A
- 55. C
- 56. C
- 57. B

SHORT ANSWER

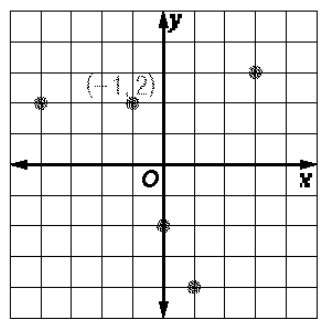
58. **Part A:**



Part B: -2 and 2

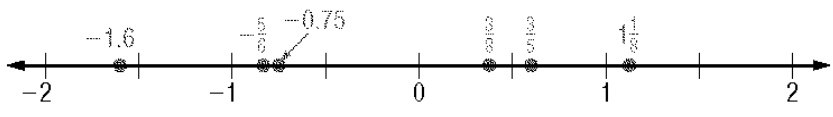
Part C: 0^0

59. **Part A:**



Part B: Student should label point $(-1, 2)$.

60. **Part A** $-1.6, -\frac{5}{6}, -0.75, \frac{3}{8}, \frac{3}{5}, 1\frac{1}{8}$



Part B Sample answer: -0.7 and $-\frac{1}{4}$