



The Exam is not limited to the questions in this document

Term 2 Practice Questions

Mathematics MAT20
Grade 07 ADV

Lesson 5.1: Example 1

1. Simplify the expression.

$$j + 0.05j =$$

2. The cost of a new pair of shoes after a 3% markup can be represented by the expression $c + 0.03c$. Simplify the expression.

3. The cost of a set of DVDs after a 25% markup can be represented by the expression $c + 0.25c$. Simplify the expression.

Lesson 5.1: Example 2

4. Simplify $-5x + y + 6 - 5y - 3$.

5. Simplify $-5 - 3w + 9 - 6z + 8w - 4z$.

6. Simplify $8z + x - 5 - 9z + 2$.

Lesson 5.1: Example 6

7. Use the distributive property to expand $-5(2x - 9)$.
8. Use the distributive property to expand $-6(-8y + 10)$.
9. Use the distributive property to expand $-7(x - 2)$.

Lesson 5.2: Example 1

10. Find the additive inverse of $3x - 6$.
11. Find the additive inverse of $-5x - 6$.
12. Find the additive inverse of $9 + x$.

Lesson 5.3: Example 2

13. Find $(6x + 5) - (3x - 2)$.

14. Find $(7x + 4) - (3 - 2x)$.

15. Find $(8x - 3) - (5x + 9)$.

Lesson 5.4: Example 1

16. Find the GCF of $12y$ and $30y$.

17. Find the GCF of $15y$ and $27y$.

18. Find the GCF of $12z$ and $14z$.

Lesson 5.4: Example 3

19. Factor $3x + 9$.

20. Factor $5x + 10$.

21. Factor $6x + 8$.

Lesson 5.5: Example 1

22. Simplify $-2(x + 3) + 7x$.

23. Simplify $2(5x - 3) + 7$.

24. Simplify $-3(4x - 9) + 10x$.

Lesson 6.1: Example 1

25. Solve $-5 = b + 8$.

26. Solve $3 + x = 12$.

27. Solve $5 = y + 8$.

28. Solve $z + 11 = 8$.

Lesson 6.1: Example 4

29. Solve $\frac{x}{2} = 5$.

30. Solve $3 = \frac{y}{-2}$

31. Solve $\frac{x}{-5} = -8$.

Lesson 6.1: Example 8

32. A stingray is at a certain depth in the ocean. After ascending 5 feet, it is now at a depth of -14 feet.

Write an equation for the situation.

33. At the end of the week, Madison had $-\$55$ in her checking account. This is $\$202$ less than the amount she had at the beginning of the week.

Write an equation for the situation.

Lesson 6.2: Examples 1 and 2

34. Solve and check $2x + 3 = 9$.

35. Solve and check $2x - 6 = 12$.

36. Solve and check $-5x - 8 = 22$.

Lesson 6.2: Example 3

37. Solve $5x - 3.8 = -13.8$.

38. Solve $10x - 2.4 = 27.6$.

39. Solve $5x + 3.3 = -6.7$.

Lesson 6.3: Example 1

40. Toya had her birthday party at the movies. It cost \$27 for pizza and \$8.50 per friend for the movie tickets.

Write an equation for the situation.

41. Liam hosted a game night at his house. He spent \$18 on snacks and \$6.75 per friend for board-game rentals.

Write an equation for the situation.

42. Ava planned a small picnic. She paid \$22 for sandwiches and \$9.25 per person for park entry fees.

Write an equation for the situation.

Lesson 6.4: Examples 1 and 2

43. Solve $3(x + 5) = 45$.

44. Solve $5(n - 2) = -30$.

45. Solve $3(x - 6) = -12$.

Lesson 6.5: Example 2

46. Jamal and two cousins received the same amount of money to go to a movie. Each boy spent \$15. Afterward, the boys had \$30 altogether.

Write an equation for the situation.

47. Three friends each received the same amount of money to spend at the arcade. Each person spent \$12. Afterward, they had \$24 altogether.

Write an equation for the situation.

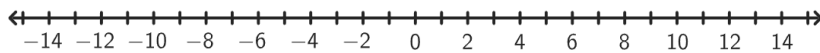
48. Sam and his three brothers each got the same amount of money for the fair. Each boy spent \$15. When they were done, they had \$40 left altogether.

Write an equation for the situation.

Lesson 7.1: Example 1

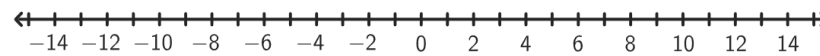
49. Solve the inequality below. Then, graph the solution on the number line.

$$x + 4 > 10$$



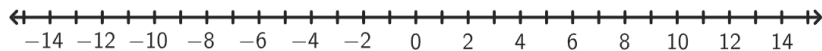
50. Solve the inequality below. Then, graph the solution on the number line.

$$4 > x + 8$$



51. Solve the inequality below. Then, graph the solution on the number line.

$$x + 6 \geq -3$$



Lesson 7.2: Example 1

52. Hannah's exercise goal is to walk at least 6 miles this week. She has already walked 2 miles this week. Determine the distance Hannah needs to walk to meet or exceed her goal.

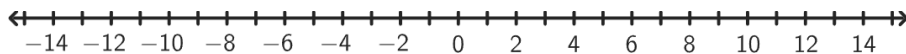
53. Jordan needs at least 10 notebooks for the school year. He already has 6 notebooks. Determine how many more notebooks Jordan needs to meet or exceed his goal.

54. Nora's goal is to drink at least 64 ounces of water today. She has already drunk 40 ounces. Determine how many more ounces she needs to meet or exceed her goal.

Lesson 7.3: Examples 1 and 2

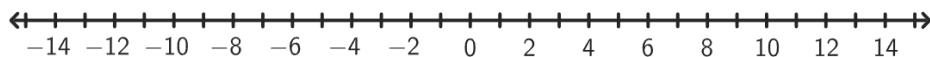
55. Solve the inequality below. Then, graph the solution on the number line.

$$6x \geq 30$$



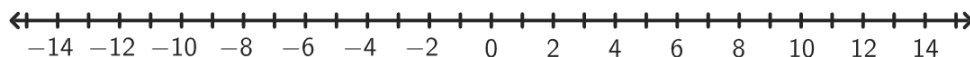
56. Solve the inequality below. Then, graph the solution on the number line.

$$2x < -6$$



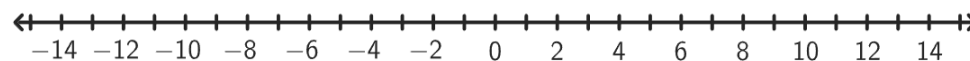
57. Solve the inequality below. Then, graph the solution on the number line.

$$\frac{x}{6} > -1$$



58. Solve the inequality below. Then, graph the solution on the number line.

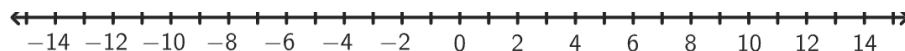
$$\frac{x}{2} \leq 3$$



Lesson 7.4: Example 1 and 2

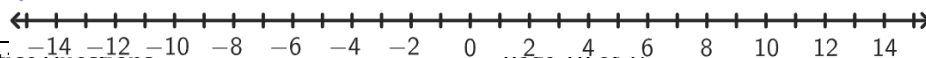
59. Solve the inequality below. Then, graph the solution on the number line.

$$-6x \leq -30$$



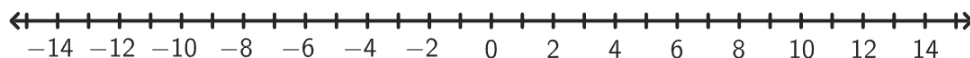
60. Solve the inequality below. Then, graph the solution on the number line.

$$-2x > 6$$



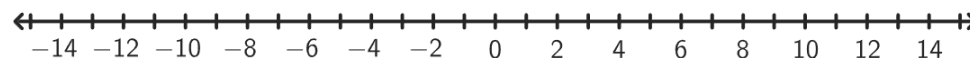
61. Solve the inequality below. Then, graph the solution on the number line.

$$\frac{x}{-6} < 1$$



62. Solve the inequality below. Then, graph the solution on the number line.

$$-\frac{x}{2} \geq -3$$



Lesson 7.5: Examples 1 and 2

63. Aisha wants to buy smoothies for her friends. She has AED 28, and each smoothie costs AED 4.

Write an inequality that represents the number of smoothies x she can afford to buy.

64. Rami is buying gaming tokens at an arcade. He has AED 45, and each token costs AED 4.

Write an inequality that represents the number of tokens x he can buy.

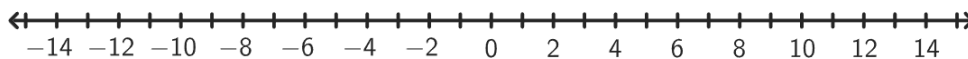
65. Sara is shopping for colored pencils. She has AED 18, and each pack costs AED 2.50.

Write an inequality that represents the number of packs x she can afford.

Lesson 7.6: Example 1

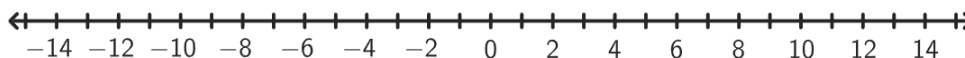
66. Solve the inequality below. Then, graph the solution on the number line.

$$-2x + 8 \leq 14$$



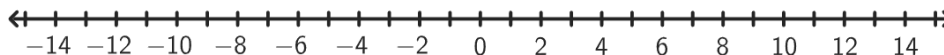
67. Solve the inequality below. Then, graph the solution on the number line.

$$-2x - 6 > 2$$



68. Solve the inequality below. Then, graph the solution on the number line.

$$-5x + 10 \leq 20$$

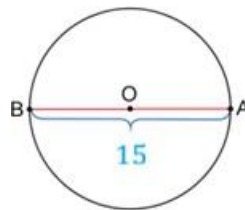


Lesson 9.1: Example 1

69. A circle with a diameter of 6 cm has a circumference of _____.

70. A circle with a diameter of 7 cm has a circumference of _____.

71. Find the circumference of the circle below.



Lesson 9.1: Example 3

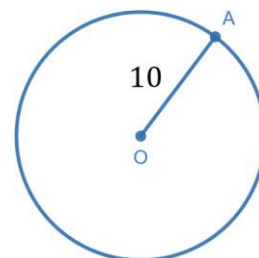
72. Find the diameter of a ring garden whose circumference is 15π meter.

73. Find the diameter of a ring garden whose circumference is 67π feet.

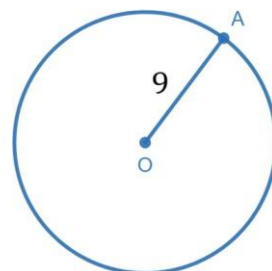
74. Find the diameter of a ring garden whose circumference is 24π inch.

Lesson 9.2: Example 1

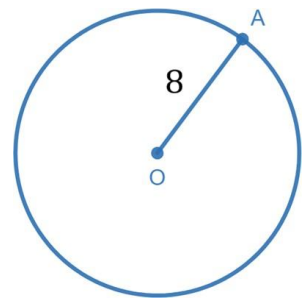
75. What is the area of the following circle?



76. What is the area of the following circle?

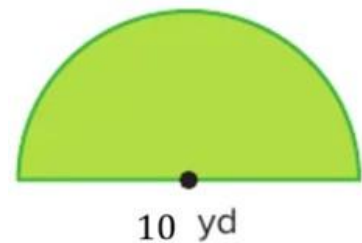


77. What is the area of the following circle?

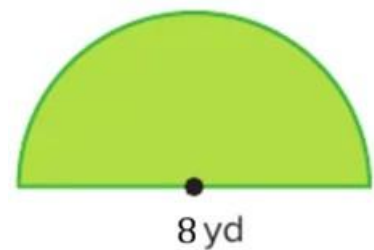


Lesson 9.2: Example 3

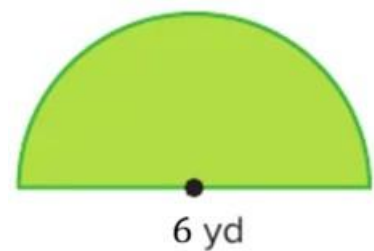
78. Find the area of the semi-circle.



79. Find the area of the semi-circle.

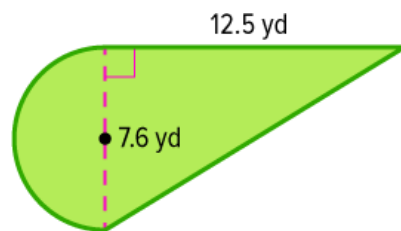


80. Find the area of the semi-circle.



Lesson 9.3: Example 1

81. What is the area of the figure? Use 3.14 for π . Round to the nearest hundredth if necessary.



_____ yd²

82. The floor of Eilene's basement has the dimensions shown.

What is the area of the basement floor? Round to the nearest hundredth if necessary.

