

7th Grade Entering Algebra Readiness - Summer Work

Your work will be collected. Keep your work neat. When you do work on a piece of paper, always start with writing the problem.

Simplify using the Order of Operations. Show all steps.

Need help? Watch a video. Click here - <https://youtu.be/dAgfnK528RA>.

1. $3(5 + 2) - 8 + 2(3)$

2. $10 + \frac{9}{3} \cdot 4 + 2$

3. $3^3 + 5^2$

4. $(7^2 - 5) \cdot 2$

5. $3^2 + 7(2 + 3) - 1$

Simplify showing all steps. (Rewrite any improper fraction answers as a mixed number).

Need help? Watch a video. Click here - <https://youtu.be/5juto2ze8Lg>

6. $\frac{1}{3} + \frac{2}{5}$

7. $\frac{3}{5} - \frac{2}{6}$

8. $\frac{2}{3} \cdot \frac{5}{6}$

9. $\frac{3}{4} \div \frac{1}{2}$

10. $\frac{2}{3} + \frac{1}{2} \cdot \frac{1}{4}$

Simplify showing all steps.

Need help? Watch a video.

Click here - <https://youtu.be/BgblvF90UE> for addition/subtraction.

Click here - https://youtu.be/K_tPbVPfHgk for multiplication/division.

11. $12(-5)$

12. $-90 \div (-9)$

13. $-15 - (-6)$

14. $22 + (-8)$

15. $(-3)^2 + 8 - 10(-2)$

Simplify showing all steps.

Need help? Watch a video. Click here. <https://youtu.be/DKC74YKJpNY>

16. $2x + 3 - x$

17. $2y + 3y - 2 + 5$

18. $3x + 2y - 5 + 3y - 2x$

19. $3xy + 2x + 5y - x$

20. $3(x + 1) - 2x$

Evaluate the expression for the given values. Show all steps.

Confused? Watch this video. https://youtu.be/OF2GtlinL_s

21. $x + y - z$ for $x = -3$, $y = 2$, and $z = -9$

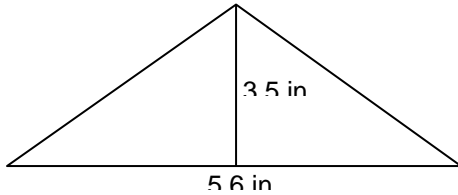
22. $2x + 2y$ for $x = -2$, $y = 5$

23. $xy - 3x$ for $x = 4$, $y = -8$

Find the area of the triangle showing all work.

Need help? Watch this video. <https://youtu.be/xCdxURXMdFY>

24.

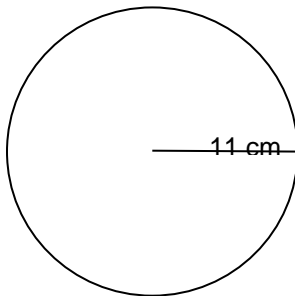


$A =$ _____

Identify the diameter of the circle. Then find the circumference. Show all steps.

Need help? Watch this video. <https://youtu.be/O-cawByg2aA>

25.

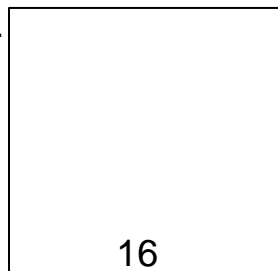


$d =$ _____ $C =$ _____

Find the perimeter and area of the square. Show all work.

Need help? Watch this video. <https://youtu.be/AAy1bsazcgM>

26.



$p =$ _____ $A =$ _____

27. John is going to fertilize his lawn. His lawn is a rectangle that measures 240 feet by 82 feet. The amount of fertilizer required is 0.03 ounces per square foot.

- Find the area of the lawn.
- How much fertilizer does John need to buy?

28. Plot the following points on the grid below. [Watch this video for help.](#)

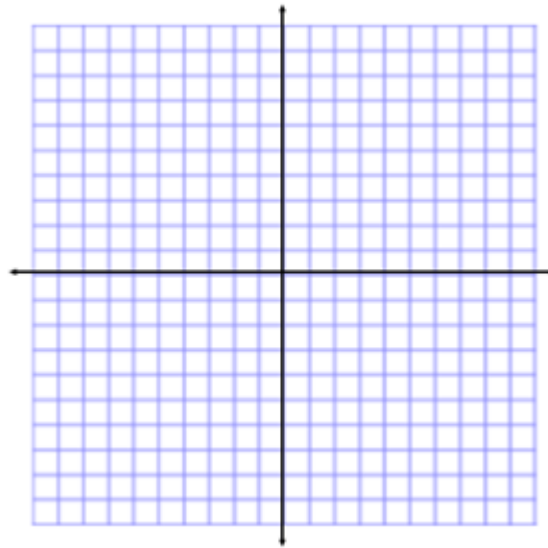
(5,2)

(-4,1)

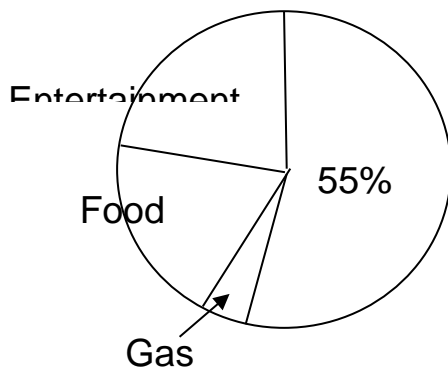
(0,0)

(-3, -5)

(1, -7)



The circle graph below shows how an average family spends money on vacation. Use this information to answer the questions below.



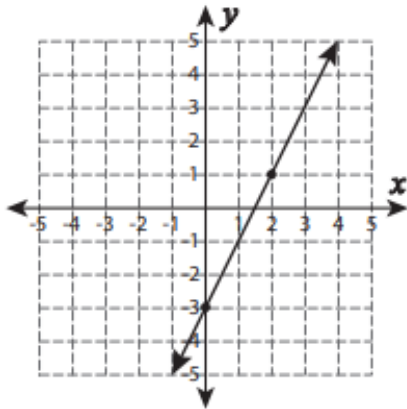
29. If a family spends an average of \$3000 on a local vacation, how much money was spent on gas?

30. What **fraction** of the cost is spent on food and entertainment?

Find the slope of the lines on the graphs.

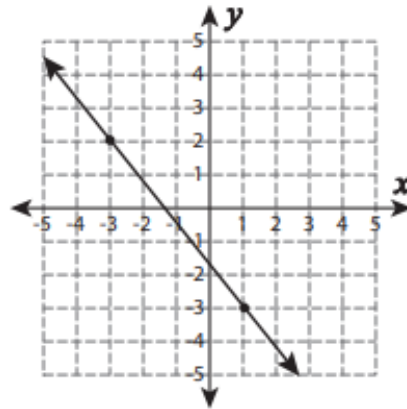
Find help here: <https://www.youtube.com/watch?v=AqOsf9R7JHA>

31.



Slope = _____

32.



Slope = _____

Find the slope between the two points.

Need help? Check here: <https://www.youtube.com/watch?v=8trWFtwyUMU>

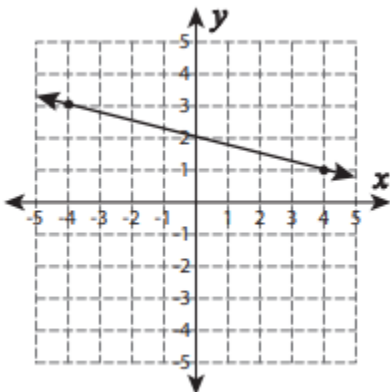
33. $(-2, 10), (-2, -15)$

34. $(-15, 10), (16, -7)$

Name the y-intercept on each graph below.

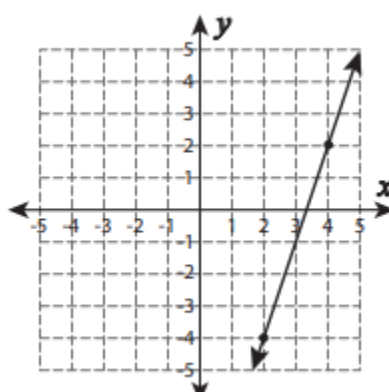
Need assistance? Watch this video: <https://www.youtube.com/watch?v=A65Ok-Q8C7s>

35.



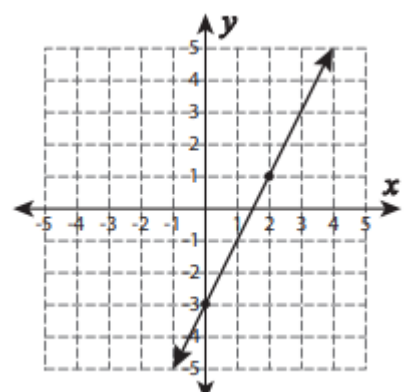
intercept: _____

36.



y - intercept: _____

37.



y - intercept: _____

y-

Find the slope in each equation.

Help is here! https://www.youtube.com/watch?v=Z65mz_8DQ0

38. $y = -\frac{2}{3}x - 1$

39. $x = 1$

40. $y = -5x - 1$

41. $2x + 3y = 9$

Find the y-intercept in each equation.

42. $y = \frac{1}{4}x + 1$

43. $y = x$

44. $y = -2x + 2$

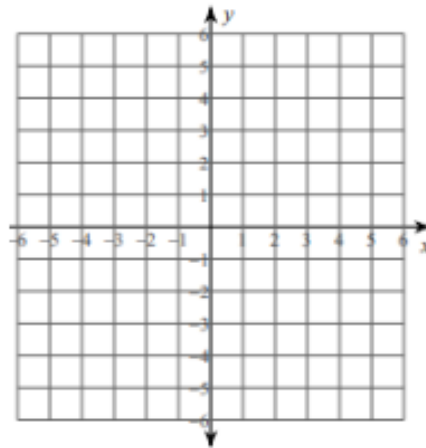
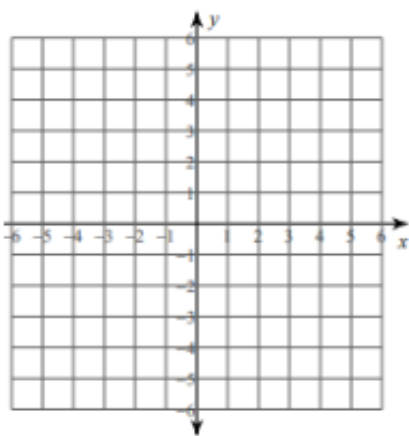
45. $y = 4$

Graph the line for each equation.

Forgot how? Look here: <https://www.youtube.com/watch?v=vGNSMUKEQ9c>

46. $y = \frac{3}{5}x - 4$

47. $y = -3x + 1$



48. $y = \frac{5}{3}x$

