Name _____ Date _____ Pd_____

Chapter 3: Linear Equations and Functions
Bringing It All Together #2

Write each phrase as an algebraic expression.

1. _____ five less than the number t
2. _____ four years older than Shannon
3. _____ the product of r and eight
4. _____ Emily's age divided by three

Write each sentence as an algebraic equation.

5. _____ The product of a number and five is negative twenty.
6. _____ The sum of a number and four is equal to negative eight.
7. _____ Fifty-six inches is nine inches shorter than Jacob's height.
8. _____ Twice the distance from the park to the school is five miles.

Balance each equation. Show your steps! (2 points each)

9. $x + 5 = -8$

10. $y - 11 = 15$

11. $14 = s + 7$

12. $w - 8 = 9$

Balance each equation. Show your steps! (2 points each)

13. $3k = -81$

14. $20 = 4x$

15. $-6n = -48$

16. $7y = -21$

OVER⟶

Name _____ Date _____ Pd_____

Find the multiplicative inverse of each number!

17. $\dfrac{5}{18}$

18. $4\dfrac{7}{8}$

Balance each equation. Show your steps! (2 points each)

19. $\dfrac{a}{3} = 9$

20. $28 = \dfrac{4}{5}h$

21. $-\dfrac{5}{8}n = \dfrac{1}{4}$

22. $-\dfrac{3}{5}p = -81$

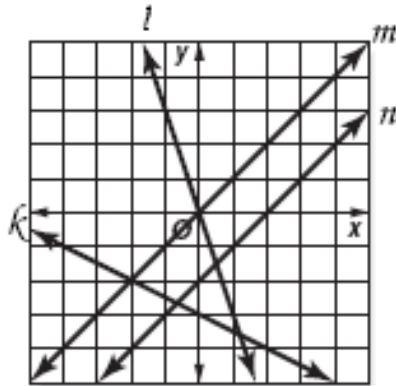Balance each equation. Show your steps! (2 points each)

23. $7c + 2 = 30$

24. $\dfrac{w}{5} + 3 = 13$

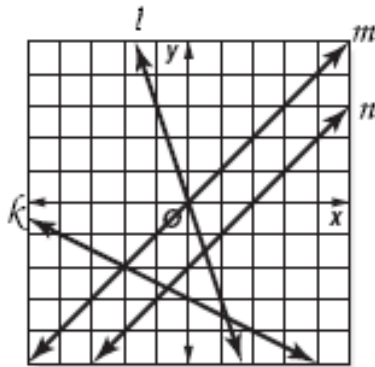25. $\dfrac{1}{5}t - 6 = 39$

26. $-4f + 5 = -11$

OVER⟶

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27. Which is the line of the graph of $y = x$? **Answer:** _____

    a. line k b. line l
    c. line m d. line n

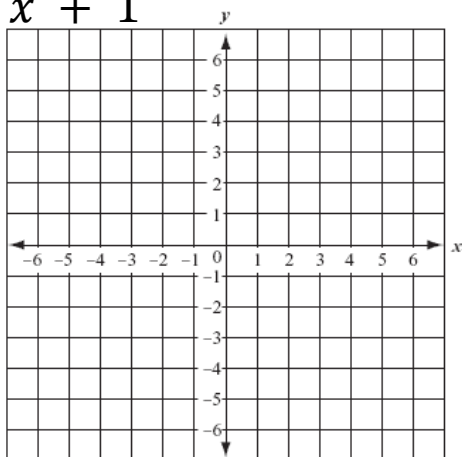28. Which is the line of the graph of $y = x - 2$? **Answer:** _____

    a. line k b. line l
    c. line m d. line n

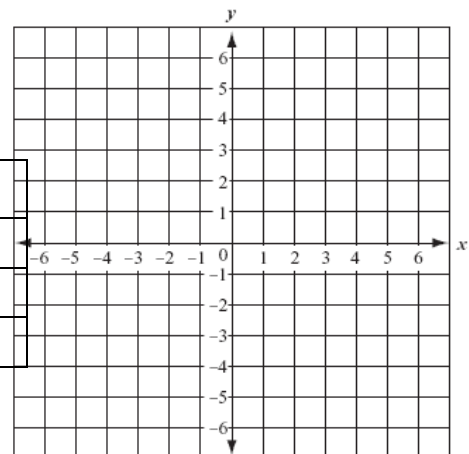Complete each function table using 3 values.
Graph each equation. (2 points each)

29. $y = x + 1$

x	y

30. $-2x + 5$

x	y

Name _____ Date _____ Pd_____

Chapter 3 <u>BIT #2</u> Answer Key

Write each phrase as an algebraic expression.

1. $t - 5$ five less than the number t

2. $s + 4$ four years older than Shannon

3. $8r$ the product of r and eight

4. $\dfrac{e}{3}$ Emily's age divided by three

Write each sentence as an algebraic equation.

5. $5n = -20$ The product of a number and five is negative twenty.

6. $n + 4 = -8$ The sum of a number and four is equal to negative eight.

7. $56 = j - 9$ Fifty-six inches is nine inches shorter than Jacob's height.

8. $2p = 5$ Twice the distance from the park to the school is five miles.

Balance each equation. Show your steps! (2 points each)

9. $\begin{aligned} x + 5 &= -8 \\ -5 \quad &\ -5 \\ \hline x &= -13 \end{aligned}$

10. $\begin{aligned} y - 11 &= 15 \\ +11 \quad &+11 \\ \hline y &= \ \ 26 \end{aligned}$

11. $\begin{aligned} 14 &= s + 7 \\ -7 \quad &\quad -7 \\ \hline 7 &= s \end{aligned}$

12. $\begin{aligned} w - 8 &= 9 \\ +8 \quad &+8 \\ \hline w &= 17 \end{aligned}$

Balance each equation. Show your steps! (2 points each)

13. $\dfrac{3k}{3} = \dfrac{-81}{3}$

     $k = -27$

14. $\dfrac{20}{4} = \dfrac{4x}{4}$

     $5 = x$

15. $\dfrac{-6n}{-6} = \dfrac{-48}{-6}$

     $n = 8$

16. $\dfrac{7y}{7} = \dfrac{-21}{7}$

     $y = -3$

Name _____ Date _____ Pd_____

Find the multiplicative inverse of each number!

17. $\dfrac{5}{18} = \dfrac{18}{5}$

18. $4\dfrac{7}{8} = \dfrac{8}{39}$

Balance each equation. Show your steps! (2 points each)

19. $(3)\dfrac{a}{3} = 9\,(3)$

$a = 27$

20. $\left(\dfrac{5}{4}\right)28 = \dfrac{4}{5}h\left(\dfrac{5}{4}\right)$

$35 = h$

21. $\left(-\dfrac{8}{5}\right)-\dfrac{5}{8}n = \dfrac{1}{4}\left(-\dfrac{8}{5}\right)$

$n = -\dfrac{2}{5}$

22. $\left(-\dfrac{5}{3}\right)-\dfrac{3}{5}p = -81\left(-\dfrac{5}{3}\right)$

$p = 135$

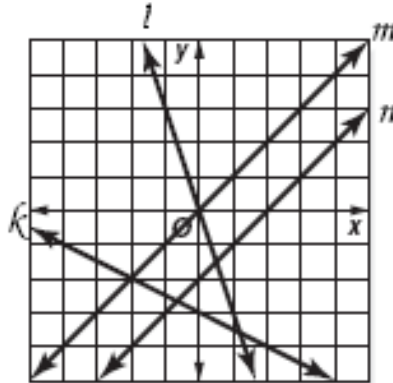Balance each equation. Show your steps! (2 points each)

23. $7c + 2 = 30$

$\underline{-2 \quad -2}$

$\dfrac{7c}{7} = \dfrac{28}{7}$

$c = 4$

24. $\dfrac{w}{5} + 3 = 13$

$\underline{-3 \quad -3}$

$(5)\dfrac{w}{5} = 10(5)$

$w = 50$

25. $\dfrac{1}{5}t - 6 = 39$

$\underline{+6 \quad +6}$

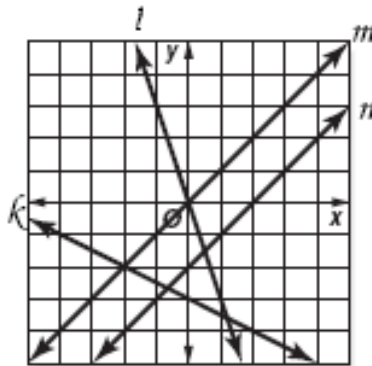$\left(\dfrac{5}{1}\right)\dfrac{1}{5}t = 45\left(\dfrac{5}{1}\right)$

$t = 225$

26. $-4f + 5 = -11$

$\underline{-5 \quad -5}$

$\dfrac{-4f}{-4} = \dfrac{-16}{-4}$

$f = 4$

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27. Which is the line of the graph of $y = x$? **Answer: C**

a. line k b. line l
c. line m d. line n

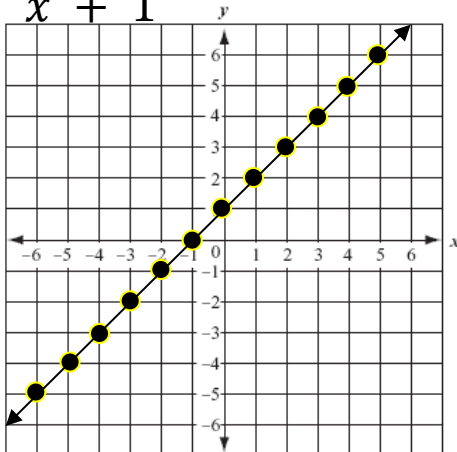28. Which is the line of the graph of $y = x - 2$? **Answer: d**

a. line k b. line l
c. line m d. line n

Complete each function table using 3 values.
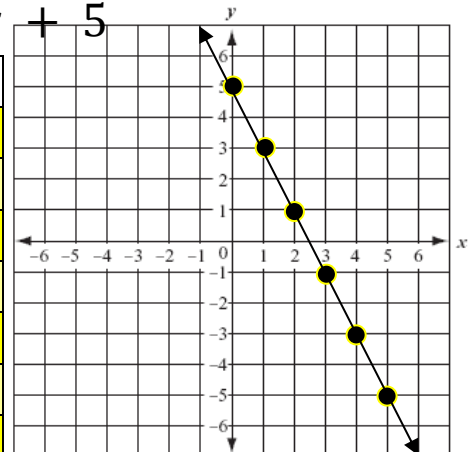Graph each equation. (2 points each)

29. $y = x + 1$

need only 3

x	y
5	6
4	5
3	4
2	3
1	2
0	1
−1	0
−2	−1
−3	−2
−4	−3
−5	−4
−6	−5

30. $y = -2x + 5$

need only 3

x	y
−1	7
0	5
1	3
2	1
3	−1
4	−3
5	−5