

- Which expression is equivalent to $12n + 2x + 48$?
 - $2(6n + x) + 48$
 - $12n - 6(x + 4)$
 - $6(2n - x + 8)$
 - $6nx + 48$
- Which expression is equivalent to $2n - 8$?
 - $8n - 10 + 14$
 - $\frac{1}{4}(8n - 32)$
 - $-2(-3n - 12)$
 - $10n - 12 - (4n - 12)$
- Which of the following expressions is equivalent to $-\frac{1}{2}(2 - 2x)$?
 - $2 - x$
 - $x + 2$
 - $x - 1$
 - $x - 2.5$
- Which of the following expressions is equivalent to $-\frac{2}{3}(-6x + 15)$?
 - $4x + 10$
 - $4x - 10$
 - $-4x - 10$
 - $-4x + 10$
- Which of the following is equivalent to this expression?
 $-6x + 8(1 + x)$
 - $2(x - 4)$
 - $2(x + 4)$
 - $2(x + 2)$
 - $2(x - 2)$

- Jenny has a stack of nickels and a stack of dimes. There are the same number of coins in each stack.

Write TWO expressions that represent the amount of money Jenny has, where n is the number of coins in each stack?

7. Jackson is given the expression below to simplify.

$$6x - 4 + 3x + 5x + 25$$

Which expression is equivalent to Jackson's expression?

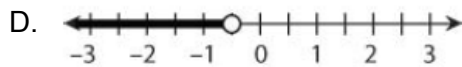
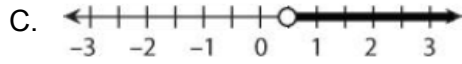
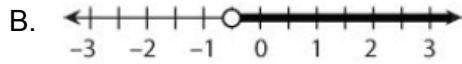
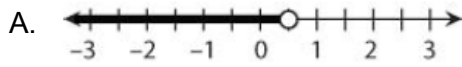
- A. $3(6x + 5)$
 - B. $18x + 23$
 - C. $7(2x + 3)$
 - D. $14x + 29$
8. Alexis has x dollars. She buys lunch using $\frac{1}{5}$ of her money and then earns \$10 by doing chores after school.

Which expressions represent how much money Alexis has left? Select TWO that are correct.

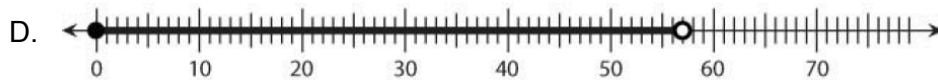
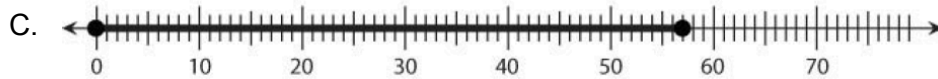
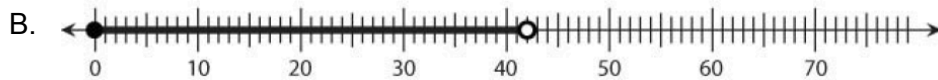
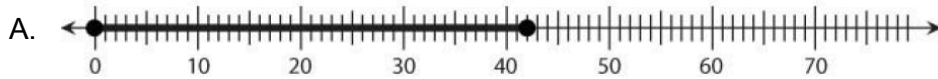
- A. $\frac{1}{5}x + 10$
 - B. $\frac{4}{5}x + 10$
 - C. $x - \frac{1}{5}x + 10$
 - D. $\frac{4}{5}(x + 10)$
 - E. $\frac{1}{5}(x + 10)$
 - F. $x - \frac{1}{5}(x + 10)$
9. Stephanie sells 15 pretzels per hour. Robert sells 12 pretzels per hour. This week, Robert sold an additional 18 pretzels. Which of the following expressions represents the total sales of both people this week, where S represents the number of hours that Stephanie worked and R represents the number of hours that Robert worked?
- A. $12S + 15R + 18$
 - B. $15S + 12R + 18$
 - C. $12S + 18R$
 - D. $12S + 15R$
10. For options A-E choose ALL of the expressions that are equivalent to $2(4x + 3)$?
- A. $12x + 3$
 - B. $2(3 + 4x)$
 - C. $8x + 6$
 - D. $4x + 3 + 4x + 3$
 - E. $12x + 9$

11. Look at this inequality.

$$-0.2x - 1.2 < -1.1$$



12. Pamela and Jill are training for a marathon. Pamela runs 17 more kilometers than one third the number Jill runs. If Pamela runs no more than 36 kilometers, which number line shows the possible number of miles, j , that Jill runs?



13. Carly has 22 coins made up of dimes and quarters. The value of the coins is more than \$3.40. Which of these represents the possible numbers of dimes and quarters that Carly has?

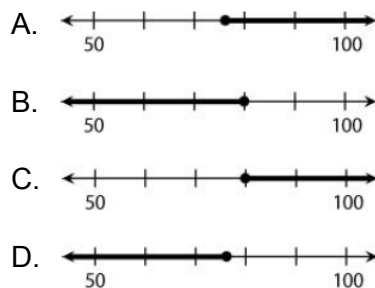
- A. Carly has between 9 and 22 dimes and between 0 and 13 quarters.
- B. Carly has between 0 and 7 dimes and between 15 and 22 quarters.
- C. Carly has between 9 and 22 quarters and between 0 and 13 dimes.
- D. Carly has between 0 and 7 quarters and between 15 and 22 dimes.

14. Jacob earns \$12 per hour. He has saved \$240 and is planning to buy a dresser that costs \$360. Which of these represent the number of hours' pay, x , that Jacob must save to be able to purchase the dresser?

Choose ALL that are correct.

- A. $12x + 240 \leq 360$
- B. $12x + 240 \geq 360$
- C. $12x \geq 120$
- D. $x \leq 10$
- E. $x \geq 10$

15. To earn a grade of B or above for the semester, a student must have a test average greater than or equal to 80. Jill's scores on the first three tests for the semester are 84, 76 and 88. Which of the following represents the range of scores Jill must get on the fourth test to earn at least a B for the semester?



16. Which equation is equivalent to $16x - 8 - 2x = 100$?

- A. $6x = 100$
- B. $10x = 100$
- C. $14x = 108$
- D. $18x = 108$

17. Lee scored 25 points in yesterday's game. That was 4 more than triple the number of points Alex scored. Which equation can be used to find, a , the number of points Alex scored?

- A. $25 + 4 = 3a$
- B. $25 = 4 + 3a$
- C. $3(25) + 4 = a$
- D. $3(25) = 4 + a$

18. Which equation is equivalent to $4 + 8(x + 2) = 12$?

- A. $8x + 20 = 12$
- B. $8x + 2 = 12$
- C. $5x + 5 = 12$
- D. $5x + 13 = 12$

19. Which of the following equations is equivalent to $30 - 8x \div 2 = 4$?

- A. $26x = 4$
- B. $30 - 4x = 4$
- C. $30 - 8x = 4$
- D. $60 - 4x = 4$

20. Which of the following is equivalent to $100 + 2(10 - 5x) = 150$?

- A. $120 - 10x = 150$
- B. $120 - 600x = 150$
- C. $-10x = 150$
- D. $57 + 30x = 150$

21. Check the value of the expression $\frac{3}{4}(28 - n)$ for each value of n given in the table below.

	Value of Expression			
	-18	9	36	66
$n = 16$	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
$n = -20$	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
$n = 52$	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
$n = -60$	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

22. The temperature in a refrigerator is 2.4°C . The temperature in the attached freezer is -10.1°C . What is the distance between 2.4 and -10.1 on a number line?

- A. 11.5
- B. 12.5
- C. 16.3
- D. 17.3

23. Marla is tracking the week's weather by recording the outside temperature at 9 p.m. each day. Her data are shown in the table below.

Day	Temperature ($^{\circ}\text{F}$)
Monday	11
Tuesday	3
Wednesday	-2
Thursday	1
Friday	-4

Which of these statements are true? Choose all that are correct.

- A. The 9 p.m. temperature decreased by 8°F from Monday to Tuesday.
- B. The 9 p.m. temperature increased by 5°F from Tuesday to Wednesday.
- C. The 9 p.m. temperature increased by 3°F from Wednesday to Thursday.
- D. The 9 p.m. temperature decreased by 3°F from Thursday to Friday.
- E. Throughout the week, the 9 p.m. temperatures decreased every day.
- F. Throughout the week, the 9 p.m. temperatures increased once.

24. At 6:00 p.m., the temperature was 20°F . In the next three hours, the temperature fell 20°F .

Select *all* true statements.

- A. The temperature was 40°F at 9:00 p.m.
- B. The temperature was 0°F at 9:00 p.m.
- C. The change in temperature from 6:00 p.m. to 9:00 p.m. is represented by -20 .
- D. The change in temperature from 6:00 p.m. to 9:00 p.m. is represented by 20 .
- E. The expression $20 + (-20)$ represents the temperature change.
- F. The expression $20 + 20$ represents the temperature change.

25. James has \$40.00 in his checking account. He goes to the bank and withdraws \$40.00. How much money does James have in his account immediately after withdrawing the \$40.00?

- A. $-\$40.00$
- B. $\$0$
- C. $\$40.00$
- D. $\$80.00$