Name:_____ Date: _____
Ms. Napolitano Equations

Topic: Expressions and Equations
CCSS: 6.EE.B.6 and 6.EE.B.7

Try Now Day 4

For which expression is the sum of the constants greater than the sum of the coefficients?

A $7 + 3x^2 + 7x + 3$

B $7 + 4x^2 + 4x + 1$

C $8 + 4x^2 + 8x + 2$

D $8 + 3x^2 + 7x + 4$

What are the coefficients in the expression $-8y^2 + 12x + 5y + 7$?

A 5, 8, 12

B -8, 5, 12

C -8, 5, 7

D 5, 7, 12

Each baseball team in a baseball league has 14 players. A total of 56 players signed up to play. If t represents the number of teams in the league, which statement is true?

A Since $56 - 14 = t$, there are 42 teams in the league.

B Since $14 + 56 = t$, there are 70 teams in the league.

C Since $14t = 56$, there are 4 teams in the league.

D Since $14 = 56 \div t$, there are 8 teams in the league.

Think-Pair-Share

. The product of a number n and 3 is 9.

A. $\frac{n}{3} = 9$

B. $n - 3 = 9$

C. $3n = 9$

D. $n + 3 = 9$

. The quotient of a number n and 3 is 9.

A. $\frac{n}{3} = 9$

B. $n - 3 = 9$

C. $3n = 9$

D. $n + 3 = 9$

Luke paid $12.69 for 3 greeting cards. Each card cost the same amount, c. Which equation and solution represent this situation?

A $3c = 12.69$; $c = 4.23$; $4.23

B $3 = 12.69 - c$; $c = 9.69$; $9.69

C $c = 3 + 12.69$; $c = 15.69$; $15.69

D $c = 12.69 \div 3$; $c = 3.42$; $3.42

The height, h, in feet, of an object dropped from the top of the Empire State Building can be estimated using the equation $h = -16t^2 + 1{,}454$, where t is the time in seconds after the object is dropped. Which is the best estimate for how far above the ground the object will be after 8 seconds?

A 1,390 feet

B 1,326 feet

C 512 feet

D 430 feet

Model

64 Kende bought 3 books that were all the same price. He paid a total of $40.20.

Part A

Write an equation that represents the above situation. Use *b* to represent the price of a book.

Equation _____

Part B

What is the cost of one book?

Show your work.

Answer _____

A family paid $142.80, which included $6.80 in taxes, for 4 play tickets. Each ticket costs the same amount. How much did each person's ticket cost before tax was added?

A $9.50

B $12.00

C $34.00

D $35.70

Independent Practice

. Solve the equation. Check your solution before answering.

$$5z = 60$$

A. z = 300

B. z = 55

C. z = 12

D. z = 65

. Solve the equation. Check your solution before answering.

$$s - 3 = 19$$

A. s = 16

B. s = 22

C. s = –22

D. s = 57

A soccer game is 60 minutes long. Forty-one minutes of the game have been played.

Write and solve an equation to find the number of minutes *m* that remain.

A. 60 = 41 + m; m=101

B. 60 = 41 + m; m=19

C. 60 = 41 – m; m=19

D. 60 = m – 41; m=101

A car salesman's total earnings, *e*, is a base salary plus a commission. The salesman has a base salary of $40,000 and receives a commission of $200 for every car, *c*, he sells. Which equation represents the total earnings for the salesman?

A $e = 40{,}000 - 200 \times c$

B $e = 40{,}000 \times c + 200$

C $e = 40{,}000 + 200 \times c$

D $e = 40{,}000 - c \div 2{,}001$

The table below shows how much Lupe earns for each mile he walks for a library fundraiser.

WALKING FOR LITERACY

Miles Walked	Money Raised ($)
0	50
1	60
2	70
3	80

Let R represent the number of dollars he raises for the fundraiser. Which equation represents how much Lupe will raise for m miles?

A $R = 50 + 10m$

B $R = m + 50$

C $R = 5 \times 10m$

D $R = 10(m + 50)$

Jason gets paid $20 to babysit for 4 hours. He gets $30 for 6 hours and $50 for 10 hours. Which equation shows how much money, m, Jason gets paid per hour, h, he babysits?

A $m = 4h$

B $m = 5h$

C $m = 10h$

D $m = 20h$

A piece of wood that is $\frac{3}{4}$ meter long is being cut into smaller pieces that are each $\frac{1}{10}$ meter long. Which equation could be solved to find the number of pieces, n, that can be made?

A $n = \frac{3}{4} \times \frac{1}{10}$

B $n = \frac{3}{4} \times \frac{10}{1}$

C $n = \frac{10}{1} \times \frac{4}{3}$

D $n = \frac{1}{10} \times \frac{4}{3}$

61 Laura earns $255 by working 20 hours each week.

Part A

Write an equation to find how much Laura earns per hour. Use *h* to represent the hourly rate.

Equation _____

Part B

Solve the equation to find Laura's hourly rate.

Show your work.

Answer _____

Part C

Laura earns $2.90 more per hour than her friend, Jess. Write an equation to show how much Jess earns per hour. Use *j* to represent her hourly rate.

Equation _____

Part D

How much does Jess earn if she works 20 hours?

Show your work.

Answer _____

Use this information for questions 1 and 2.

After Kwan spent $5 of the money he earned for mowing lawns, he had $15 left.

1. Which equation represents how to find the amount Kwan had before spending the money?

   A. $m - 5 = 15$

   B. $m + 5 = 15$

   C. $5m = 15$

   D. $\frac{m}{5} = 15$

2. Which is the amount that Kwan had before spending the $5?

   A. $3

   B. $10

   C. $20

   D. $75

Use this information for questions 3 and 4.

Larry scored 180 points this season in 15 games.

3. Which equation represents how to find the points Larry scored per game this season?

   A. $15 + g = 180$

   B. $g - 15 = 180$

   C. $\frac{g}{15} = 180$

   D. $15g = 180$

4. Larry scored 24 more points last season than he did this season. Which equation represents how to find how many points Larry scored last season?

   A. $\frac{24}{p} = 180$

   B. $p - 24 = 180$

   C. $24p = 180$

   D. $\frac{p}{24} = 180$

Use this information for questions 5 and 6.

Pete has 4 times as many model cars as Steve. Pete has 24 model cars.

5. Which equation represents how to find the number of model cars Steve has?

   A. $\frac{s}{4} = 24$

   B. $s - 4 = 24$

   C. $4s = 24$

   D. $s + 4 = 24$

6. How many model cars does Steve have?

   A. 6

   B. 20

   C. 28

   D. 96

Use this information for questions 7 and 8.

Kristin worked a total of $10\frac{1}{2}$ hours over 2 days. She worked $6\frac{3}{4}$ hours the first day and h hours the second day.

7. Which equation represents how to find the number of hours Kristin worked the second day?

   A. $6\frac{3}{4}h = 10\frac{1}{2}$

   B. $h - 6\frac{3}{4} = 10\frac{1}{2}$

   C. $10\frac{1}{2}h = 6\frac{3}{4}$

   D. $6\frac{3}{4} + h = 10\frac{1}{2}$

8. Kristin was paid $12 per hour. How much money did Kristin earn during the two days?

   A. $126

   B. $81

   C. $45

   D. $22.50

Use this information for questions 9 and 10.

Mateo jogged $25\frac{9}{10}$ miles last week. He jogged the same course all 7 days last week.

9. Which equation can be used to find the number of miles Mateo jogged each day last week?

   A. $\frac{m}{7} = 25\frac{9}{10}$

   B. $7m = 25\frac{9}{10}$

   C. $7 + m = 25\frac{9}{10}$

   D. $m - 7 = 25\frac{9}{10}$

10. Mateo jogged $3\frac{1}{4}$ miles more this week than last week. How many miles did he jog this week?

    A. $22\frac{13}{20}$ miles

    B. $23\frac{1}{3}$ miles

    C. $28\frac{5}{7}$ miles

    D. $29\frac{3}{20}$ miles

11. A club had q members until 21 people left. Now it has 63 members.

    A. Write an equation to represent how many members belonged in the club before the people left.

    B. How many members were in the club before the people left?

Choose the correct answer.

1. Landon bought 4 books and spent $25.80. Each book cost the same amount. Which equation can be used to find the cost of each book?

   A. $4b = 25.8$

   B. $4 + b = 25.8$

   C. $\frac{b}{4} = 25.8$

   D. $b - 4 = 25.8$

Use this information for questions 2 and 3.

Emma walked her dog for $\frac{1}{2}$ hour before school and $\frac{3}{4}$ hour after school.

2. Which equation can be used to find the total number of hours Emma walked her dog?

   A. $\frac{1}{2} + h = \frac{3}{4}$

   B. $\frac{1}{2}h = \frac{3}{4}$

   C. $\frac{3}{4}h = \frac{1}{2}$

   D. $h - \frac{1}{2} = \frac{3}{4}$

3. Which is the total number of hours that Emma walked her dog?

   A. $\frac{1}{4}$ hour

   B. $\frac{2}{3}$ hour

   C. $1\frac{1}{4}$ hours

   D. $1\frac{1}{2}$ hours

4. The Running Club had r members until 12 people joined. Now it has 21 members. Which equation can be used to find the number of members the Running Club had before the new members joined?

   A. $12r = 21$

   B. $12 + r = 21$

   C. $r - 12 = 21$

   D. $\frac{r}{12} = 21$

Use this information for questions 5 and 6.

It costs $7.50 per person to ice skate at Cheap Skate Rink. Five friends went to Cheap Skate for the afternoon.

5. Which equation can be used to find the total cost?

   A. $\frac{f}{5} = 7.5$

   B. $\frac{5}{f} = 7.5$

   C. $5 + f = 7.5$

   D. $5f = 7.5$

6. What was the total cost for the friends?

   A. $1.50

   B. $2.50

   C. $35.50

   D. $37.50

7. The book Easton is reading is 280 pages. There are 8 chapters that are all the same number of pages. Which equation can be used to find the number of pages in each chapter?

A. $8 + c = 280$

B. $8c = 280$

C. $\frac{c}{8} = 280$

D. $\frac{8}{c} = 280$

8. Alexis spent $25.75 at the clothes store. She applied a coupon for $7.50. What was the cost of the clothes before the coupon was applied?

A. $17.25

B. $18.25

C. $32.25

D. $33.25

9. Paige practiced her guitar for $3\frac{1}{2}$ hours this weekend. She practiced for $1\frac{1}{4}$ hours on Saturday. How many hours did she practice on Sunday?

A. $1\frac{3}{4}$ hours

B. $2\frac{1}{4}$ hours

C. $4\frac{3}{4}$ hours

D. $5\frac{1}{4}$ hours

10. Bryce sold three times as many raffle tickets as Josiah. If Bryce sold 84 raffle tickets, how many did Josiah sell?

A. 28

B. 81

C. 87

D. 252

11. Xavier streamed 6 movies for $75 from his cable provider.

A. Write an equation to represent, c, the cost of each movie.

B. What is the cost of each movie?

C. Xavier had a gift card for $100 to pay for the streams. Write an equation to represent, d, the amount of money in dollars that Xavier has left on the gift card?

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Homework Day 4

1. Which expression represents "the product of 8 squared and the difference of a number n and 9"?

   A. $8^2 \times (n - 9)$

   B. $8^2 \times (n + 9)$

   C. $8^2 + 9n$

   D. $8^2 - 9n$

2. What is the value of the expression below when $a = 4$?

   $6a + 7$

   A. 31

   B. 41

   C. 53

   D. 71

3. Which expression is equivalent to $9(4 + r)$?

   A. $36r$

   B. $36 + r$

   C. $13r$

   D. $36 + 9r$

4. Which number is a solution for the inequality below?

   $5x \leq 20$

   A. 90

   B. 20

   C. 10

   D. 0

5. Franklin paid \$152 for 8 DVDs. Each DVD was the same price. Which shows the equation that represents the situation and the price of each DVD?

   A. $\frac{d}{8} = 152$; \$1,216

   B. $d - 8 = 152$; \$160

   C. $d + 8 = 152$; \$144

   D. $8d = 152$; \$19

6. Which equation best represents the relationship between x and y shown in the table?

x	0	1	2	3
y	1	4	7	10

   A. $y = x + 1$

   B. $y = 3x + 1$

   C. $y = 4x$

   D. $y = 5x - 1$

7. Josephine bought a CD that cost \$18. She handed the clerk d dollars. She received more than \$30 in change. Which inequality best represents d, the number of dollars she handed the clerk?

   A. $d > 30$

   B. $d \geq 30$

   C. $d > 48$

   D. $d \geq 48$

8. What is the value of k in the following equation?

$$\frac{1}{4}k = 8$$

A. 2
B. 16
C. 32
D. 64

9. Describe the expression $15 + (12 \div n)$ in words.

10. The equation $y = x - 2$ describes how the variables x and y are related.

A. Complete the table of values below for $y = x - 2$. Show all your work.

x	$y = x - 2$	y	(x, y)
2			
4			
6			
8			

B. Graph $y = x - 2$ on the coordinate grid below.