Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_

7.EE.2

\_\_\_\_\_1. Leo bought a used car for *x* dollars. One year later the value of the car was 0.88*x* .

Which expression is another way to describe the change in the value of the car? (2013)

A. 0.12% decrease C. 12% decrease

B. 0.88% decrease D. 88% decrease

\_\_\_\_\_2. The population of a city is expected to increase by 7.5% next year. If *p* represents the

current population, which expression represents the expected population next year? (2014)

A. 1.75*p* B. 1.075*p C. p* + 0.075D. 1+ 0.075

\_\_\_\_\_3. Sammy drew a rectangle that was *w* inches wide. The expression 2(2*w*) + 2(*w*)

represents the perimeter of the rectangle that Sammy drew. Which statement relates

the perimeter to the width of the rectangle? (2014)

A. The perimeter is 6 inches more than the width.

B. The perimeter is 6 times the width.

C. The perimeter is 2 inches more than the width.

D. The perimeter is 2 times the width.

\_\_\_\_\_4. Sally has a discount card that reduces the price of her grocery bill in a certain grocery

store by 5%. If *c* represents the cost of Sally’s groceries, which expression represents

Sally’s grocery bill? (2014)

A. 0.05*c* B. 0.95*c C. c* − 0.05 *D. c* + 0.95

\_\_\_\_\_5. The original selling price of a share of stock was *d* dollars. The selling price for a

share of the same stock at a later date was represented by the expression

1.15(0.95d). Which description could explain what happened to the price of the share

of stock? (2016)

A. The price decreased by 5% and then increased by 0.15%

B. The price decreased by 95% and then increased by 0.15%

C. The price decreased by 5% and then increased by 15%

D. The price decreased by 95% and then increased by 15%

\_\_\_\_\_6. Lance bought *n* notebooks that cost $0.75 each and *p* pens that cost $0.55 each. A

6.25% sales tax will be applied to the total cost. Which expression represents the total

amount Lance paid, including tax? (2016)

A. 0.0625(n + p) + 0.0625(0.75n + 0.55p)

B. (0.75n + 0.55p) + 0.0625(0.75n + 0.55p)

C. 0.75(0.0625n) + 0.55(0.0625n)

D. 0.75(1.0625n) + 0.55(1.0625n)

\_\_\_\_\_7. The amount of money in a bank account increased by 21.5% over the last year. If the

amount of money at the beginning of the year is represented by *n,* which expression

represents the amount of money in the bank account after the increase? (2017)

A. *n* + 0.215*n* B. *n* + 21.5*n* C. 0.215*n* D. 21.5*n*

\_\_\_\_\_8. An item with an original price of *p* dollars is on sale at a 25% discount. Which expression is **not**

equivalent to the price of the item with the discount? (2017)

1. (1.0*p* - 0.25*p*) B. (1.0 - 0.25)*p* C. 0.75*p* D. 0.25*p*

\_\_\_\_\_9. The measure of one side of a square is (*s* + 3) inches long. Which pair of expressions

both represent the perimeter of this square? (2017) no calculator

1. 2s + 3 and (s + 3)(s + 3)
2. 2(s + 3) and (s + 3)(s + 3)
3. 4s + 3 and (s + 3) + (s + 3) + (s + 3) + (s + 3)

D. 4(s + 3) and (s + 3) + (s + 3) + (s + 3) + (s + 3)

\_\_\_\_\_10. At a store, a hat has a regular price of *x* dollars. During a sale, the price of the hat is

discounted by 20%. The expression 0.8x describes the discounted price, in dollars, of the hat.

Which expression also describes the discounted price, in dollars, of the hat? (2018)

A. 0.2x B. x – 20 C. x – 0.2 D. x - 0.2x

\_\_\_\_\_11.The regular price of an item at a store is dollars. The item is on sale for off the regular price.

Some of the expressions shown below represent the sale price, in dollars, of the item.

Expression A: 0.2p

Expression B: 0.8p

Expression C: 1 – 0.2p

Expression D: p – 0.2p

Expression E: p – 0.8p

Which two expressions each represent the sale price of the item?

A. Expression A and Expression E C. Expression B and Expression D

B. Expression B and Expression C D. Expression C and Expression D

**Pre Common Core Exam Questions**

1. Cindy has four more than five times as many cousins as Kathy, *k*. Which expression represents

how many cousins Cindy has compared with Kathy?

A. 4*k* + 5 B. 5*k* – 4 C. 5*k* + 4 D. 5*k*(*k* + 4)

2. Anna is a painter. She charges $130 for paint supplies and $25 for each hour, *h*, she works.

Which expression represents the total amount Anna charges?

A. (130 + 25)*h* B. 130 + 25*h* C. 130*h* + 25 D. 130 + (25 + *h*)

\_\_\_\_\_\_\_3. Diane is **3 years older** than **twice** her sister Samantha’s age. If Samantha’s age is

represented by *s*, which expression represents Diane’s age?

A. 2s + 3 B. s – 3 C. 3s + 2 D. s + 3

\_\_\_\_\_\_\_4. Janine’s dog weighs **three pounds less than twice** the weight of Wanda’s dog, *d*. Which

expression represents the weight of Janine’s dog?

A. 2 + d – 3 B. 3 + d – 2 C. 2d – 3 D. 3 – 2d

\_\_\_\_\_\_\_5. **Simplify** the following **expression**: 12*xy* – 15*x* + 6*xy*

A. –9*xy* B. 3*xy* C. 18*xy –* 15*x* D. 6*xy* – 15*x*

\_\_\_\_\_\_\_6. **Simplify** the following expression: 3x + 9x

A. 12 B. 12x C. 12x2 D. 12(x + x)

\_\_\_\_\_\_\_7. Which algebraic expression represents “six less than half a number”?

A.  B.  C.  D. 

\_\_\_\_\_\_\_8. This month, Drew worked six hours less than twice the number of hours, *h*, he worked last

month. What expression represents the number of hours Drew worked this month?

A. 2 – 6*h* B. 2*h* – 6 C. 6 – 2*h* D. 6*h* – 2

\_\_\_\_\_\_\_9. The expression below represents the total cost in dollars, including shipping, for a certain

number of music CDs, *m* .

8*m* + 5

Based on the expression above, what is the total cost for 4 music CDs?

A. $13 B. $17 C. $32 D. $37

\_\_\_\_\_ 10. What verbal expression is the same as the algebraic expression below?

8 – 3*x*

A. three times a number minus eight C. three minus eight times a number

B. eight times a number minus three D. eight minus three times a number

\_\_\_\_\_ 11. Which situation is **best** represented by the expression 4*h* + 2?

A. Kepa spends 4 hours babysitting and 2 hours traveling.

B. Kepa spends 4 hours babysitting and receives $2 in travel expenses.

C. Kepa will be paid $4 for babysitting and spends 2 hours traveling.

D. Kepa will be paid $4 for every hour of babysitting plus $2 for travel costs.

\_\_\_\_\_ 12. Simplify the expression below.

12*ab* + 8*ab* + 5*ab*

A. 3*ab* B. 25*ab* C. 25(3*ab*) D. 25 + *ab*

\_\_\_\_\_ 13. Which situation is **best** represented by the expression 2*c* – 5?

A. Alicia walked 2 miles fewer than 5 times the number of miles, *c*, Courtney walked.

B. Alicia walked 5 miles fewer than 2 times the number of miles, *c*, Courtney walked.

C. Alicia walked 2 more than 5 times the number of miles, *c*, Courtney walked.

D. Alicia walked 5 more than 2 times the number of miles, *c*, Courtney walked.