

Name _____ Date _____ Period _____

Math 7 – End of 3rd Quarter Mixed Practice Day 1 (Think 4 Ways)

- 1) Craig went bowling with \$25 to spend. He rented shoes for \$5.25 and paid \$4.00 for each game. What was the greatest number of games Craig could have played? *Create a picture to help you solve the problem. What will you draw to represent each game? Maybe a bowling pin? Make sure to label each picture with its price. Use your diagram to solve the problem.*

- A) 4
B) 5
C) 6
D) 7

Read questions 2 and 3.

a) How are they alike? _____

b) How are they different? _____

c) Can they both be solved using the same process? _____

Now solve the problems below.

- 2) The label on a $1\frac{1}{2}$ pound bag of wild flower seeds states that it will cover an area of 375 square feet. Based on this information, what is the number of square feet that 1 pound of wildflower seeds will cover? Show work.

- A) $\frac{1}{250}$ B)
250
C) $562\frac{1}{2}$ D) 750

- 3) Ms. Batista gave her class 12 minutes to read. Carrie read $5\frac{1}{2}$ pages in that time. At what rate, in pages per hour, did Carrie read? Show work.

- A) $1\frac{1}{10}$ B) 22
C) $27\frac{1}{2}$ D) 66

4) Which expression is equivalent to $(7x - 5) - (3x - 2)$?

Show each step in solving this question starting with your "invisible 1"

Step 1 put in the invisible 1: _____

Step 2 distribute the invisible 1: _____

Step 3 Identify like terms in step 2

Step 4 combine like terms: _____

A) $10x - 7$

B) $10x - 3$

C) $4x - 7$

D) $4x - 3$

Gather with two of your classmates to form a group of 3.

1st everyone put their writing utensils on a desk so that all 3 are together.

2nd Read about the commutative property. Once everyone has read form a line. Now use the property on the 3 of you.

3rd Read about the associative property. Once everyone has read form a line. Create parentheses by joining arms. Then use the associative property.

4th Read about the distributive property. Once everyone has read imagine you are all inside the parentheses and the pencils are outside the parentheses. Distribute.

Now, together, solve #5

5) The expression below was simplified using two properties

of operations. Which properties were applied in steps 1 and 3, respectively?

$$5(11z + 29 + 6z)$$

Step 1: $5(11z + 6z + 29)$

Step 2: $5(17z + 29)$

Step 3: $85z + 145$

- A) Commutative property, then distributive property
- B) Commutative property, then identity property
- C) Associative property, then distributive property

Properties of Numbers

Commutative Property

Commutative sounds like the word, **commute** — to move around.

Imagine if a series of numbers has been shuffled around in an addition or multiplication equation. Regardless of the order of numbers, the sum or product will always share the same answer.

$12 + 5 = 17 \Rightarrow 5 + 12 = 17$
 $4 + 9 = 13 \Rightarrow 9 + 4 = 13$
 $2 + 6 + 3 = 11 \Rightarrow 3 + 2 + 6 = 11$

$7 \times 4 = 28 \Rightarrow 4 \times 7 = 28$
 $6 \times 9 = 54 \Rightarrow 9 \times 6 = 54$
 $2 \times 5 \times 3 = 30 \Rightarrow 3 \times 2 \times 5 = 30$

Associative Property

Associative is similar to the word, **associate** — to join with a partner.

Think about ways to pair a series of numbers in an addition or multiplication problem. When you add or multiply them, they will always share the same sum or product no matter how they are grouped.

$8 + (6 + 9) \Rightarrow 8 + 15 = 23$
 $(8 + 6) + 9 \Rightarrow 14 + 9 = 23$

$(5 \times 2) \times 3 \Rightarrow 10 \times 3 = 30$
 $5 \times (2 \times 3) \Rightarrow 5 \times 6 = 30$

Distributive Property

Distributive is much like the word, **distribute** — to share or hand out.

Consider an equation with a multiplier over addends. The distributive property lets you "distribute" the multiplier over the addends to solve the equation. First, multiply each addend by the multiplier separately. You are distributing the multiplier! Then add the products to find the answer.

$6 \times (3 + 4)$
Distribute the multiplier and find the products. Add the products to solve the equation.
 $(6 \times 3) + (6 \times 4) \Rightarrow 18 + 24$
Answer: $6 \times (3 + 4) = 42$

D) Associative property, then commutative property

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Math 7 – End of 3rd Quarter Mixed Practice Day 1 (Tools of retreat)

- 1) The Lions won 16 games last year. This year The Lions won 20 games. What is the percent increase in the number of games the Lions won from last year to this year? *1st Find the key words in the problem and underline them.*

2nd Percent! Think percent proportion and set up two empty fractions joined with an equal. Fill in the 100. Your looking for percent so put the x in. One fraction is done!

3rd Increase.....think change.....do work.....How much was the increase? _____

4th Put the increase over 16 or 20? Which is the original or starting value??

5th Solve the proportion. Show Work

A) 20%

B) 25%

C) 80%

D) 125%

- 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? *Pretend you know value of p . Pick an easy number like 100. Now substitute that value into each of the answers below and evaluate. Which answer makes the most sense for an increase close to 10%?? Show Work!*

A) $1.75p$

B) $1.075p$

C) $p + 0.075$

D) $1 + 0.075$

- 3) An owner of a small store knows that in the last week 54 customers paid with cash, 42 paid with a debit card, and 153 paid with a credit card. Based on the number of customers from last week, which fraction is closest to the probability that the next customer will pay with cash?

Probability. THINK what we want to happen _____ Simplify _____
TOTAL NUMBER Make a fraction

A) $\frac{1}{5}$

B) $\frac{1}{4}$

C) $\frac{1}{3}$

D) $\frac{1}{2}$

- 4) Scientists determined that Antarctica's average winter temperature was -34.44°C . The difference between this temperature and Antarctica's highest recorded temperature was 49.44 degrees. What was Antarctica's highest recorded temperature?

1st Narrow your choices. Is the temperature higher or lower than -34.44 ? Cross off a choice.

2nd Draw a labeled diagram. It should look like a number line or thermometer.

3rd Reread the problem to make sure your answer is reasonable.

- A) -83.88°C B) -15°C C) 15°C D) 83.88°C

- 5) Laticia randomly selected 25% of the seventh-grade students in her school and asked them their favorite season. Of the students surveyed, 51 chose summer as their favorite season. Based on the data, what is the most reasonable prediction of the number of seventh-grade students in her school who would choose summer as their favorite season? Show work.

1st Find the key words or symbols in the problem and underline them.

2nd Percent! Think percent proportion and set up two empty fractions joined with an equal. Fill in the 100. Your given the percent so put it in. One fraction is done!

3rd Where do you put the 51? Is it a part or a whole? Top or bottom?

5th What are you solving for the part or the whole? Put the x in the correct place.

6th Solve. Show Work.

- A) 15 B) 75 C) 150 D) 200