6TH GRADE SPRING MATH PACKET

Skills PRACTICE & Word PROBLEMS

THE NUMBER SYSTEM
Skill Practice and Problem Solving

1. There are 323 students and 17 buses. How many students will be on each bus if there is an equal number of students on each bus?

2. While playing a game, you move 5 steps forward and then 11 steps backward. Writ[e] each number as an integer.

3. You ha[ve]
You p[ ]
bottle[ ]

GEOMETRY
Skill Practice and Problem Solving

parallelogram.

2. A shelf has the shape of a triangle. The base of the shelf is 24 centimeters, and the height is 17 centimeters. Find the area of the shelf.

EXPRESSIONS AND EQUATIONS
Skill Practice and Problem Solving

1. Amber's mother gives her $15 and she saves $3 a week. The expression $15 + 3w$ gives the amount she save after w weeks. How much money will Amber have saved after 2 weeks, 5 weeks, and 10 weeks?

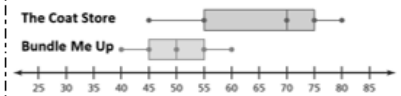2. The num[ ]
more tha[ ]
the dram[ ]
students[ ]
expressi[ ]
the art c[ ]

STATISTICS AND PROBABILITY
Skill Practice and Problem Solving

1. Compare the mean monthly rainfall (in [ ]) for the two cities.

| 7 | 3.3 | 1.5 | 3.8 | 0.2 |
| 7 | 3.1 | 4.5 | 2.2 | 1.1 |

2. The double box-and-whisker plot represents the prices of coats at two stores. Which store's prices are more spread out? Explain.

The Coat Store

Bundle Me Up

25 30 35 40 45 50 55 60 65 70 75 80 85

RATIOS AND PROPORTIONAL RELATIONSHIPS
Skill Practice and Problem Solving

1. The ratio of time a student spends on their art project to time the student spends on their science project is 3:4. The total amount of time the student spends on projects for these classes is 56 minutes. How much time does the student spend on projects for each subject?

2. Convert the speed 6 kilometers per hour to meters per minute.

3. Find the missing values in each ratio table. Then write the equivalent ratios.

| Balls | 6 | 12 |

4. The [l]ength of a garden is 125% of its width. If the width of the garden is 8 meters, what is [ ]

nows the number of text [ ] the students in a class sent in [ ]ribe the shape of the [ ]

essages Sent

Text

3. ows the number of text [ ]

4. The table shows the weights of several puppies. Identify the outlier.

Puppies Weights (pounds)				
5.5	6.7	5.4	5.45	6.5
6.6	5.7	5.9	8.25	6

5. Lindsey earn $70 for working 5 ho[urs]. How much does she earn for working 12 lawns?

6. A 5-ounce can of peas cost $0.85. An 11-ounce can of peas cost $2.20. Which is the [b]etter [buy]?

, median, and mode of the [ ] measure that best [ ] Explain your reasoning.

7, 65, 87, 72, 62, 12

6. The stem-and-lea[f] [ ] inches) of the ele[ ] fishing contest. [ ] of the fish?

Stem

0	7
1	2	4
2	0	0	1	4

Key: 1 | 2 = 12 inches

✓ The Number System
✓ Ratios and Proportional Relationships
✓ Expressions and Equations
✓ Geometry
✓ Statistics and Probability

Exceeding the CORE

THE NUMBER SYSTEM
Skill Practice and Problem Solving

1. There are 323 students and 17 buses. How many students will be on each bus if there is an equal number of students on each bus?	**2.** While playing a game, you move 5 steps forward and then 11 steps backward. Write each number as an integer.
3. You have $\frac{4}{9}$ of a large bottle of cooking oil. You pour $\frac{3}{5}$ of the cooking oil into a smaller bottle. How much of the entire larger bottle did you pour into the smaller bottle?	**4.** Write the prime factorization of 84.
5. You are making identical gift bags using 12 packs of crayons and 28 bottles of bubbles. What is the greatest number of gift bags you can make with no items left over?	**6.** A length of a rope is 8 meters long. How many $\frac{2}{5}$-meter pieces can be cut from the length of rope?
7. Mya has ballet lessons every sixth day and swimming lessons every fourth day. Today she has both lessons. In how many days will Mya have both lessons on the same day again?	**8.** A backpack at the store costs $24.94. A pack of markers at the same store costs $3.82. You pay for both the backpack and pack of markers with a $50 bill. How much change do you receive?

RATIOS AND PROPORTIONAL RELATIONSHIPS
Skill Practice and Problem Solving

1. The ratio of time a student spends on their art project to time the student spends on their science project is 3:4. The total amount of time the student spends on projects for these classes is 56 minutes. How much time does the student spend on projects for each subject?	**2.** Convert the speed 6 kilometers per hour to meters per minute.

3. Find the missing values in each ratio table. Then write the equivalent ratios.

Dolls	4		12
Balls	6	12	

4. The length of a garden is 125% of its width. If the width of the garden is 8 meters, what is the area of the garden?

5. Lindsey earn $70 for working 5 hours. How much does she earn for working 12 lawns?	**6.** A 5-ounce can of peas cost $0.85. An 11-ounce can of peas cost $2.20. Which is the better buy?

7. Justin's baby brother weighs 10 pounds. How much does Justin's baby brother weigh in kilograms?	**8.** Using coupons, you spend $120 grocery shopping. This is 80% of the total retail price of the groceries. How much would you have spent if you had not used the coupons?

EXPRESSIONS AND EQUATIONS
## Skill Practice and Problem Solving

|	
1. Amber's mother gives her $15 and she saves $3 a week. The expression $15 + 3w$ gives the amount she save after w weeks. How much money will Amber have saved after 2 weeks, 5 weeks, and 10 weeks?	**2.** The number of students in the art club is 3 more than twice the number of students in the drama club. Let d be the number of students in the drama club. Write an expression to find the number of students in the art club.
3. After four rounds, 23 students are eliminated from a math contest. There are 18 students remaining. Write an equation you can use to find the number of students that started the math contest.	**4.** The manager of Cups R' Us handed out 125 coupons to his customers on Monday, c coupons on Tuesday, and 220 coupons on the Wednesday. Write an expression for the total number of coupons the manager handed out. Then simplify the expression.
5. Lauryn receives a discount on each book she purchases. The original price of each book is x dollars. She purchase 4 books for a total of $(4x - 12)$ dollars. Factor the expression. What can you conclude about the discount?	**6.** Ms. Hill travels 2400 miles at a rate of 400 miles per day to visit her grandchildren. Write and solve an equation to find the number of days it takes Ms. Hill to complete the trip.
7. A bus has enough room for up to 28 passengers. Write and graph an inequality that represents the number p of passengers on the bus.	**8.** Jamal is x years old. His mother is 28 years older than Jamal. Jamal's uncle is two times older than Jamal's mother. Write and simplify an expression that represents Jamal's uncle age in years.

Name _____ Class_____ Date_____

GEOMETRY
Skill Practice and Problem Solving

1. Find the area of the parallelogram.
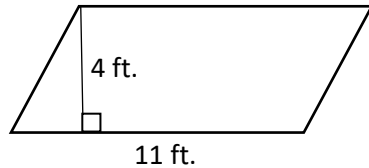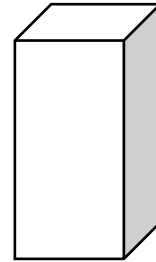
4 ft.

11 ft.

2. A shelf has the shape of a triangle. The base of the shelf is 24 centimeters, and the height is 17 centimeters. Find the area of the shelf.
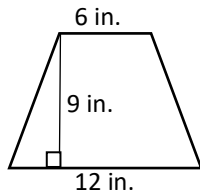
3. The rectangle and the trapezoid have the same area. What is the length ℓ of the rectangle?
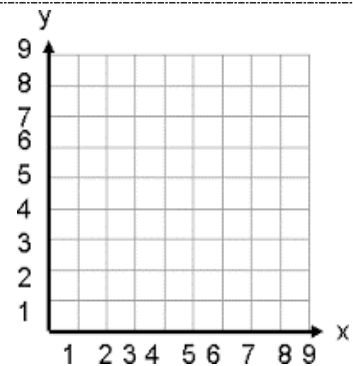
5 ft.

ℓ

21 ft.

5 ft.

9 ft.
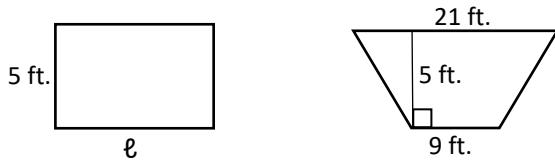
4. Find the number of faces, edges, and vertices of the solid.

5. Find the area of the trapezoid.

6 in.

9 in.

12 in.

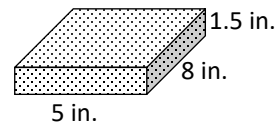**6.** The vertices of a rectangle are A (1, 7), B (3, 7), C (3, 1.5), and D (1, 1.5). Find the perimeter and the area of the rectangle.

7. How many 1-inch cubes do you need to create a cube with an edge length of 6 inches?

8. Barry is wrapping a book with the given dimensions as a present. What is the least amount of wrapping paper needed to wrap the book?

1.5 in.

8 in.

5 in.

Name _____ Class_____ Date_____

STATISTICS AND PROBABILITY
Skill Practice and Problem Solving

1. Compare the mean monthly rainfall (in inches) for the two cities. 	**City A**	1.7	3.3	1.5	3.8	0.2
City B	0.7	3.1	4.5	2.2	1.1		**2.** The double box-and-whisker plot represents the prices of coats at two stores. Which store's prices are more spread out? Explain. **The Coat Store** **Bundle Me Up** 25 30 35 40 45 50 55 60 65 70 75 80 85

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Bundle Me Up

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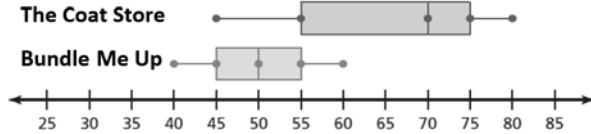
3. The dot plot shows the number of text messages that the students in a class sent in one day. Describe the shape of the distribution.
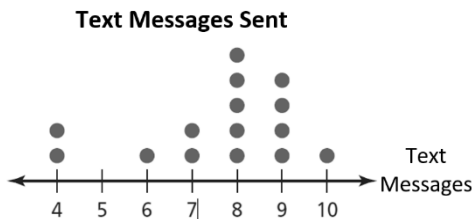
Text Messages Sent

Text Messages

4   5   6   7| 8   9   10

4. The table shows the weights of several puppies. Identify the outlier.

Puppies Weights (pounds)				
5.5	6.7	5.4	5.45	6.5
6.6	5.7	5.9	8.25	6

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5. Find the mean, median, and mode of the data. Choose the measure that best represents the data. Explain your reasoning.

$$91, 87, 65, 87, 72, 62, 12$$

6. The stem-and-leaf plot shows the length (in inches) of the eleven fish, caught during a fishing contest. What is the median weight of the fish?

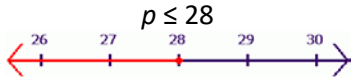| Stem	Leaf
0	7 8
1	2 4 4 6 9
2	0 0 1 4

Key: 1|2 = 12 inches

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7. A student took 5 tests this marking period and had a mean score of 90. Her scores on the first 4 tests were 90, 96, 86, and 92. What was her score on the fifth test?

8. Charlene records the numbers of pieces of red colored candies in ten bags of candy of assorted colors. Find and interpret the mean absolute deviation of the data.

6, 6, 7, 7, 8, 8, 8, 10, 10, 11

Name _____ Class_____ Date_____

6th Grade Spring Math Packet - ANSWER KEY

Question #	The Number System	Ratios and Proportional Relationships	Expressions and Equations	Geometry	Statistics and Probability
1.	19 students	art: 24 minutes; science: 32 minutes	$21, $30, $45	44ft²	Because 2.1 is less than 2.32, City B averaged more rainfall.
2.	5; −11	100 meters per minute	$2d + 3$	204 cm²	the range of prices at The Coat Store is greater than the range of prices at Bundle Me Up.
3.	$\frac{4}{15}$ of the entire larger bottle	8,18;4:6, 8:12,12:18	$s - 23 = 18$	15 ft	skewed left
4.	$2^2 \cdot 3 \cdot 7$	80 m²	$125 + c + 220; c + 345$	6 faces, 12 edges, 8 vertices	8.25 pounds
5.	4 gift bags	$168	*4(x-3);the* factored expression shows a $3 discount for each book purchased	81 in²	mean: 68, median: 72, mode: 87; The mean or the median could be used to represent the data. The mode is greater than most of the data.
6.	20	11-ounce	$400d = 2400$; 6 days	perimeter 15 units; area 11square units	16 inches
7.	12 days	about 4.5 kg	$p \leq 28$	216 cubes	86
8.	$21.24	$150	$2(x + 28) = 2x + 56$	119in²	1.34; The data values differ from the mean by an average of 1.34 pieces of candy.

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