



## Probability Pizzazz

Materials: three number cubes

The probability that the three cubes will show three different numbers is given by the ratio:

Probability =  $\frac{\text{ways to roll 3 different numbers}}{\text{total ways to roll the 3 cubes}}$

If different numbers must be rolled, there are 6 possibilities for the first cube, 5 possibilities for the second cube, and 4 possibilities for the third cube.

$P(3 \text{ different numbers}) =$

$$\frac{6 \cdot 5 \cdot 4}{6 \cdot 6 \cdot 6} = \frac{5}{9} \approx .56 \text{ or } 56\%$$

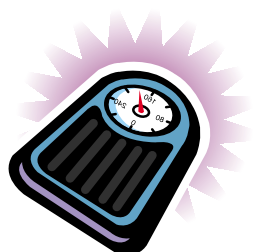
Students are to roll the three cubes 10 times each and compile their information. Does the experiment reflect the theoretical probability?

(4.04)



## Solve This!

Stephanie weighs 96 pounds and JoAnne weighs 86 pounds. The sum of their weights is twice as much as Lane's weight. Write and solve an equation to determine  $w$ , Lane's weight.



(5.03)



## Fraction Action

Terry watches  $\frac{1}{2}$  of a video on Saturday. He watches another  $\frac{1}{3}$  of the video on Sunday. How much of the video did he watch?

(1.04, 1.07)



## Geometry Gems

Complete the chart showing how lines may intersect. If the task is not possible, write NP in the cell.

Number of Points of Intersection

	0	1	2	3	4	5
1						
2					NP	
3						
4						

(3.01)



## Mathematically Speaking

Do squares with the same area have equal perimeters?  
Do rectangles with the same area have equal perimeters? Explain.

(2.02)

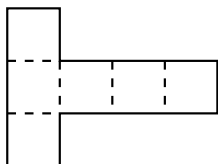


# Keeping Skills Sharp

1. Define prime number.
2. Replace each box with a number.

$$\begin{array}{r} \square 6 2 \square \\ - 2 \square 1 6 \\ \hline 6 4 \square 0 \end{array}$$

3. A circle has a circumference of 30 cm. What is its radius when measured to the nearest tenth of a centimeter?
4. When cut out and folded, what solid figure can be made out of this shape?



5. How many faces are in a triangular prism?
6. Which letter does not have a line of symmetry?  
C Z W

7. Which is a better buy:  
3 for \$1.00 or 2 for \$0.75?

8.  $1 \frac{3}{4} \times 2 \frac{3}{5} =$

9. What is the sum of the measures of the angles of a triangle?

10. Write 2,642 in words.

Write answers here:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_



# Mental Math

Directions to Students:

Write your answers as the questions are called out.  
Each question will be repeated only once.

1

\_\_\_\_\_

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\_\_\_\_\_

# Answer Key

Grade 6  
WEEK  
19

## Geometry Gems













Number of Points of Intersection

### Fraction Action

$\frac{5}{6}$  of the video

### Solve This

91 pounds

	0	1	2	3	4	5
1		NP	NP	NP	NP	NP
2			NP	NP	NP	NP
3					NP	NP
4			NP			

### Mathematically Speaking

All squares must have equal sides, so an area of 36 in.<sup>2</sup> means the side must be 6 inches and the perimeter 24 inches. However, rectangles do not have to have equal sides. If a rectangle has an area of 36 in.<sup>2</sup>, its sides might be 4 × 9 or 3 × 12. In each case the perimeter would be different.

### Probability Pizzazz

Answers will vary

## Keeping Skills Sharp

- A prime number has exactly two factors, 1 and itself.
- $$\begin{array}{r} 8626 \\ - 2216 \\ \hline 6410 \end{array}$$
- 4.8 cm
- cube
- five
- Z
- 3 for \$1.00
- 4.55 or  $4\frac{11}{20}$
- 180 degrees
- Two thousand six hundred forty-two

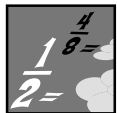
## Mental Math

This section provides an opportunity for sharpening students' mental computation.

- $9\frac{2}{4}$  to the nearest whole number.
- How many months are in 12 years?
- List the factors of 14.
- How many centimeters are in 1 kilometer?
- Write 60% as a decimal.
- $7 + \frac{3}{8} + \frac{5}{8}$
- $8 \div .25$
- $11 - 7\frac{1}{2}$
- $5^2 + 5$
- Estimate:  $7\frac{1}{8} + \frac{13}{14}$

## Mental Math

- 10
- 144
- 1, 2, 7, 14
- 100,000 cm
- 0.60
- 8
- 32
- $3\frac{1}{2}$
- 30
- about 8



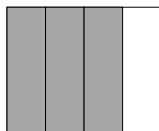
(1.04, 1.07)

## Fraction Action

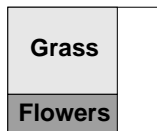
Mrs. Smith has  $\frac{3}{4}$  of an acre of yard. She plants grass on  $\frac{2}{3}$  of it. What fractional part of an acre is Mrs. Smith's grass?



One Acre



Mrs. Smith's Yard



## Probability Pizzazz

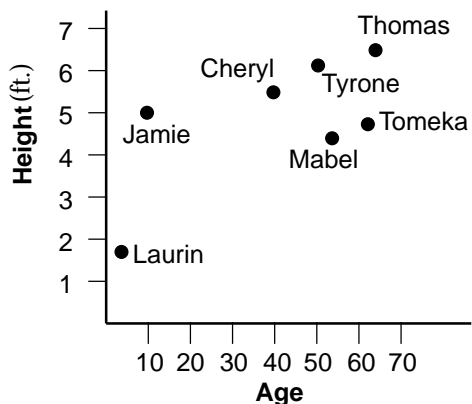
There are five red, three green, and two blue cubes in a box. Without looking, you select one cube and place it on the table. You then select another cube in the same manner. What is the probability that both cubes will be green?

(4.05)



## Solve This!

How many people are taller than 63 inches?



(Review)



## Geometry Gems

Triangle ABC: A(4,10), B(10,18), C(7,5) is transformed according to the rule

$$(x', y') = (x - 3, y + 2)$$

What are the coordinates of A'B'C'?

Are the two triangles congruent? Explain.

(3.03)



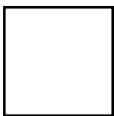
## Mathematically Speaking

If  $R \div S = T$ , is T always less than R? Explain.

(1.04)



# Keeping Skills Sharp

1. Solve for  $W$ :  $422.4 \div 12 = W$
2. Robin ordered 6 extra-large pizzas. Each pizza is divided into 14 slices. How many slices of pizza are there altogether?
3. Write  $7^2$  in standard form.
4. Write  $\frac{1}{3}$  as a decimal.
5. What is 2.1 less than 5.62?
6. Find the area in square feet.  
  
24 inches
7. Write the largest possible number using these digits: 3, 4, 5, 6, 7.
8. What is the value of 5 in 100.5?
9. Draw two squares and shade  $1\frac{1}{2}$  of them.
10. What time will it be  $4\frac{1}{2}$  hours from now?

Write answers here:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

9. \_\_\_\_\_

10. \_\_\_\_\_



# Mental Math

Directions to Students:

Write your answers as the questions are called out.  
Each question will be repeated only once.

1

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# Answer Key

Grade 6

WEEK  
20

## Mathematically Speaking

No, explanations will vary.

## Solve This

Two people

## Geometry Gems

A'(1,12), B'(7, 20), C' (4, 7)

The triangles are congruent.

## Fraction Action

One-half of an acre is planted with grass.

## Probability Pizzazz

$$P(\text{green, green}) = \frac{3}{10} \times \frac{2}{9} = \frac{6}{90}$$

## Keeping Skills Sharp

1.  $W = 35.2$
2. 84
3. 49
4.  $0.\overline{33}$
5. 3.52
6. 4 square feet
7. 76,543
8. five tenths
9. answers will vary
10. answers will vary

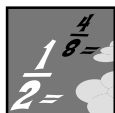
## Mental Math

This section provides an opportunity for sharpening students' mental computation.

1.  $300 + 7,000 + 50$
2.  $3,800 - 300 - 200$
3.  $20 + 60 - 30 - 10$
4.  $60 + 20 - 40 - 30 + 20$
5.  $6 \times 9 \times 500$
6.  $5\frac{3}{4} + \frac{3}{4}$
7.  $6\frac{1}{5} - \frac{4}{5}$
8.  $46\frac{5}{8} + 4\frac{5}{8}$
9. If one book costs \$12.50, how much will three books cost?
10. 12 cups are to 3 quarts as \_\_\_ cups are to 1 quart.

## Mental Math

1. 7,350
2. 3,300
3. 40
4. 30
5. 27,000
6.  $6\frac{1}{2}$
7.  $5\frac{2}{5}$
8.  $51\frac{1}{4}$
9. \$37.50
10. 4

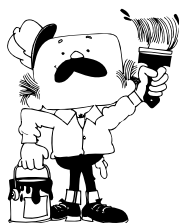


## Fraction Action

Tom painted  $\frac{1}{3}$  of the fence.

Ed painted  $\frac{1}{4}$  of the fence.

What part of the fence is unpainted?



(1.04, 1.07)



## Probability Pizzazz

Larry has a boat and a cottage at the beach. When hurricanes threaten, there is a 10% chance his boat will be sunk and a 15% chance that his cottage will be damaged. What is the probability that his boat will sink and his cottage will be damaged this season?



(4.04)



## Solve This!

Everyone in a club ordered either a small pizza for \$3.50 or a sub for \$4.50. There are ten people in the club and the total bill was \$38. How many ordered subs, and how many ordered pizza?

# of Subs	Cost	# of Pizzas	Cost	Total

(1.04, 1.07)



## Geometry Gems

A turtle crawls around a circle with a radius of 2 units and a center at point  $C(3,4)$ . Another turtle crawls around a circle with a radius of 3 units and a center at point  $D(-5,4)$ . What is the shortest distance that the turtles could be from one another?



(3.04)

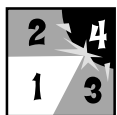


## Mathematically Speaking

Write and solve a problem that fits the following equation:

$$2x + 18 = 60$$

(5.03)



# Keeping Skills Sharp

Write answers here:

1. How much is 68 tens? 1. \_\_\_\_\_
2. What is the quotient when 18 is divided by 3? 2. \_\_\_\_\_
3. 5 pounds = \_\_\_\_ ounces 3. \_\_\_\_\_
4. What is the largest whole number that will make this true?  
 $m$  to the nearest hundred is 600. 4. \_\_\_\_\_
5. Which is more, 0.607 or 0.67? 5. \_\_\_\_\_
6.  $\frac{3}{4}$  of 18.5 is ? 6. \_\_\_\_\_
7. What is 75% of 120? 7. \_\_\_\_\_
8.  $\frac{3}{12} \div \frac{1}{3} =$  8. \_\_\_\_\_
9.  $7\frac{1}{2} + 4\frac{3}{9} =$  9. \_\_\_\_\_
10. Marcie has a formula which tells her how many scoops,  $S$ , of coffee she needs to put in a pot when she knows the number of ounces,  $N$ , she wants to make. The formula is  $S = \frac{N}{10} + 1$   
How many scoops will she need to make 40 ounces? 10. \_\_\_\_\_



## Mental Math

Directions to Students:

Write your answers as the questions are called out.  
Each question will be repeated only once.

1

\_\_\_\_\_

6

\_\_\_\_\_

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\_\_\_\_\_

7

\_\_\_\_\_

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5

\_\_\_\_\_

10

\_\_\_\_\_



# Answer Key

Grade 6

WEEK  
2 1

## Fraction Action

$\frac{5}{12}$  of the fence is unpainted

## Geometry Gems

3 units

## Mathematically Speaking

Answers will vary.

## Solve This

Three ordered subs and seven ordered pizza.

## Probability Pizzazz

$0.10 \times 0.15 = 0.0150$  or

$$\frac{10}{100} \times \frac{15}{100} = \frac{150}{10,000}$$

## Keeping Skills Sharp

- 680
- 6
- 80 ounces
- 649
- 0.67
- $13.875$  or  $13\frac{7}{8}$
- 90
- $\frac{3}{4}$
- $11\frac{5}{6}$
- 5 scoops

## Mental Math

This section provides an opportunity for sharpening students' mental computation.

- $9 \times 600$
- $90 \times 9$
- $2,800 \div 70$
- $1,800 \div 3$
- $6500 + 120 + 40$
- Find the greatest common factor of 24 and 40.
- Write  $4\frac{5}{6}$  as an improper fraction.
- How many centimeters are in  $4\frac{1}{4}$  meters?
- 4 kilometers = \_\_\_\_ meters
- 9.4 meters = \_\_\_\_ centimeters

## Mental Math

- 5,400
- 810
- 40
- 600
- 6,660
- 8
- $\frac{29}{6}$
- 425 centimeters
- 4,000 meters
- 940