

1th grade

RATIONAL NUMBER OPERATIONS

QUICK CHECK

Name _____ Answer Key _____
 Date _____ Pd _____

1. A size 8 kids shoe measures $9\frac{2}{3}$ inches. If 5 pairs of size 8 kids shoes are lined end to end, then how many inches will they cover?

- A. $36\frac{2}{3}$ B. $48\frac{1}{3}$ C. $77\frac{1}{3}$ D. 62

2. The record low temperature in Fargo, ND is -37°F . The record high is 109°F . What is the difference in the record high and the record low temperatures?

- F. 72
 G. 109
 H. 33
 J. 146

3. The local volleyball team hosts a concession stand to raise money. They can spend \$120 to purchase popcorn, candy, and drinks. They purchase 95 bags of popcorn at \$0.75 each and 35 bags of candy at \$1.20 each. How much money does the volleyball team have left to spend on drinks?

- A. \$7.25 B. \$15.50 C. \$6.75 D. \$20.25

4. Mrs. Sloan is purchasing 3.4 pounds of trail mix that costs \$4.25 per pound. How much change will Mrs. Sloan receive if she gives the cashier \$20.00

- F. \$14.45 H. \$5.55
 G. \$12.55 J. \$7.45

5. There are 36 people in a fitness studio. What fraction represents the number of people running?

- $\frac{3}{8}$ of the people lifted weights
 - $\frac{1}{3}$ of the people did cross training
 - the remaining people were running
- A. $\frac{7}{24}$ B. $\frac{17}{24}$
 C. $\frac{5}{12}$ D. $\frac{7}{8}$

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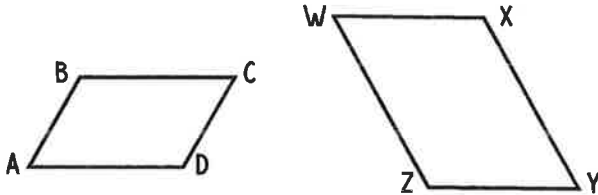
PROPORTIONALITY & SCALE DRAWINGS

QUICK CHECK

Name _____ Answer Key _____

Date _____ Pd _____

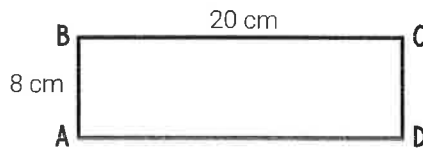
1. Figure ABCD is similar to figure WXYZ. Which proportion must be true for these figures?



- A. $\frac{AB}{BC} = \frac{ZW}{WZ}$ B. $\frac{BD}{DC} = \frac{ZY}{XY}$ C. $\frac{AB}{DC} = \frac{WX}{ZY}$ D. $\frac{DA}{ZY} = \frac{CD}{XY}$

2. The rectangle is being reduced by a scale factor of $\frac{3}{4}$. What is the area of the new image?

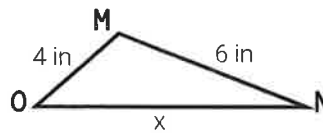
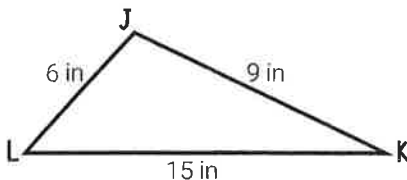
- F. 180 cm²
G. 90 cm²
H. 160 cm²
J. 75 cm²



3. Micah made a scale model of the Empire State Building. The building has an actual height of 381 meters. Micah's model used a scale in which 1 cm represents 50 meters. What is the height in centimeters of Micah's model?

- A. 3.2
B. 19.05
C. 36.83
D. 7.62

4. Triangle JKL is similar to triangle MNO. What is the perimeter of triangle MNO?



- F. 9 in G. 27 in H. 20 in J. 11 in

1.	(A)	(B)	(C)	(D)			
2.	(F)	(G)	(H)	(J)			
3.	(A)	(B)	(C)	(D)			
4.	(F)	(G)	(H)	(J)			
5.	(A)	(B)	(C)	(D)			
6.	(F)	(G)	(H)	(J)			
7.	(A)	(B)	(C)	(D)			
8.	(F)	(G)	(H)	(J)			
9.	(A)	(B)	(C)	(D)			
10.	Use the grid below.						
				6	.	2	5
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-	1	1	1	1		1	1
	2	2	2	2		2	2
	3	3	3	3		3	3
	4	4	4	4		4	4
	5	5	5	5		5	5
	6	6	6	6		6	6
	7	7	7	7		7	7
	8	8	8	8		8	8
	9	9	9	9		9	9

RATES AND PERCENTS

WARM-UP

Name _____ Answer Key _____

Date _____ Pd _____

1. A group of 400 town residents is asked to attend a town hall meeting. Of the 400 residents asked to attend, 36 were able to attend. What percentage of the town residents were able to attend?

9%

2. Jason worked the following hours in the month of June. What was the percent increase from week 1 to week 3?

WEEK	HOURS
1	18
2	26
3	24
4	33

33. $\bar{3}$ %

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RATES AND PERCENTS

WARM-UP

Name _____

Date _____ Pd _____

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RATES AND PERCENTS

QUICK CHECK

Name _____ Answer Key _____
 Date _____ Pd _____

1. Todd plans to swim 18 laps in the pool. Each lap is 50 yards. So far Todd has swam 738 yards. What percentage of the total has Todd completed?

- A. 18%
- B. 82%
- C. 62%
- D. 77%

2. Jameson is seeking a loan with a simple interest rate of 3% per year. If he wants to borrow \$8,000, then how much will he be charged in interest after 4 years?

- F. \$1,280.00
- G. \$960.00
- H. \$240.00
- J. \$9,600.00

3. A hot air balloon travels 18 miles in 3 hours. At this rate how many miles will the hot air balloon travel in $\frac{3}{4}$ hour?

- A. 4.5
- B. 6
- C. 11.5
- D. 13.5

4. The price of a tablet was increased from \$180 to \$207. By what percentage was the price of the table increased?

- F. 33%
- G. 8%
- H. 27%
- J. 15%

5. Margie has a \$50.00 budget to purchase a \$45.00 pair of boots. If there is an 8% sales tax rate, then how much under budget will Margie be?

- A. \$8.60
- B. \$5.00
- C. \$1.40
- D. \$4.20

1. (A) ● (C) (D)
2. (F) ● (H) (J)
3. ● (B) (C) (D)
4. (F) (G) (H) ●
5. (A) (B) ● (D)
6. (F) ● (H) (J)
7. ● (B) (C) (D)
8. (F) (G) ● (J)
9. (A) (B) (C) ●
10. Use the grid below.
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PROPORTIONAL RELATIONSHIPS

QUICK CHECK

Name _____

Date _____ Pd _____

1. Burger Town sells cheeseburgers for \$7.95 each, plus an additional \$1.00 for each extra topping, t . Which of the following equations best represents the cost, c , of a cheeseburger?

A. $c = 7.95t$

C. $c = 7.95t + 1.00$

B. $c = 8.95t$

D. $c = 7.95 + 1.00t$

2. A standard bathtub holds 60 gallons of water. A full tub drains 12 gallons per minute. Which of the following tables best represents the situation?

F.

X	1	2	4	5
Y	60	48	24	12

H.

X	1	3	4	5
Y	48	24	12	0

G.

X	0	2	4	5
Y	60	48	24	12

J.

X	1	2	3	4
Y	12	24	36	48

1.	(A)	(B)	(C)	●
2.	(F)	(G)	●	(J)
3.	(A)	●	(C)	(D)
4.	(F)	●	(H)	(J)
5.	(A)	(B)	(C)	●
6.	●	(G)	(H)	(J)
7.	●	(B)	(C)	(D)
8.	(F)	●	(H)	(J)
9.	●	(B)	(C)	(D)
10.	(F)	●	(H)	(J)

3. Which of the following represents the constant of proportionality in the table below?

MONTHS	2	4	6	8	10
TOTAL REVENUE	\$190	\$380	\$570	\$760	\$950

A. $k = 85$

C. $k = 190$

B. $k = 95$

D. $k = 125$

4. The table below shows the relationship between the number of miles traveled, x , and the number of gallons of gas used, y . Which of the following equations best represents the relationship?

X	35	70	105	140	175
Y	1	2	3	4	5

F. $35 = 1x$

G. $y = \frac{1}{35}x$

H. $y = 35x$

J. $y = 3.5x$

EQUATIONS AND INEQUALITIES

QUICK CHECK

Name _____ Answer Key _____
 Date _____ Pd _____

1. Ms. Hernandez is taking her children and their friends to the movies. She will pay \$10 for her adult ticket and \$7 for each child ticket. Ms. Hernandez does not want to spend more than \$40. Which inequality can be used to find c , the number of child tickets Ms. Hernandez can purchase?

- A. $7 + 10x > 40$ B. $10x - 7 \leq 40$ C. $10 + 7x > 40$ D. $10 + 7x \leq 40$

2. If $x = -3$, then which inequality is true?

- F. $-5x + 2 \leq 12$ G. $3x - 7 \geq -16$ H. $14 + 2x < 5$ J. $\frac{1}{2}x + 6 > 11$

3. Which two expressions are equivalent?

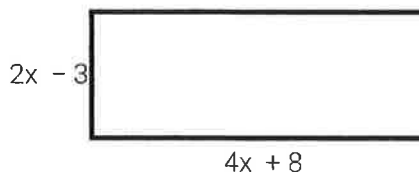
- A. $4(2+x)$
 $4 \cdot 2 + 2 \cdot x$ B. $4 + 2 + x$
 $(4 + 2) + x$ C. $4 \cdot x + 2$
 $4 \cdot (x + 2)$ D. $4 \div (2 - x)$
 $4 - 2 \div x$

4. Which expression is equivalent to $9y - \frac{1}{2}(4y + 20)$?

- F. $11y - 10$ H. $7y + 10$
G. $7y - 10$ J. $11y + 10$

5. If the perimeter of the rectangle is 118 units, then what is the value of x ?

- A. $x = 9$
B. $x = 13$
C. $x = 18$
D. $x = 21$



1.	(A)	(B)	(C)	(D)		
2.	(F)	(G)	(H)	(J)		
3.	(A)	(B)	(C)	(D)		
4.	(F)	(G)	(H)	(J)		
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10. Use the grid below.						
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+	0	0	0	0	0	0
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2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9

ANGLE RELATIONSHIPS

QUICK CHECK

Name _____ Answer Key _____

Date _____ Pd _____

1. A triangular garden is being formed with stones. The three sides measure 4 meters by 6 meters by 7 meters. Which of the following is a true statement about the side lengths of the triangle?

- A. The side lengths will not form a triangle because $6 + 4 > 7$.
- B. The side lengths will form a triangle because $4 + 6 < 7$.
- C. The side lengths will not form a triangle because $7 + 4 < 6$.
- D. The side lengths will form a triangle because $6 + 7 > 4$.

2. Two angles are supplementary to each other. If the first angle measures 58° , then which of the following could be the measure of the second angle?

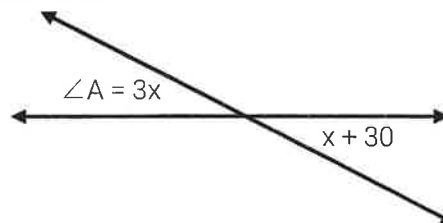
- F. 122°
- G. 32°
- H. 58°
- J. 90°

3. Which of the following will NOT produce a triangle?

- A. angle measures of 33° , 67° , and 80°
- B. side lengths of 5 inches, 5 inches, and 9 inches
- C. angle measures of 90° , 60° , 30°
- D. side lengths of 4 inches, 8 inches, and 12 inches

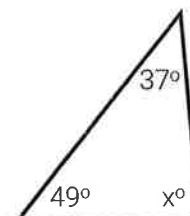
4. What is the measure of $\angle A$ in the image shown below?

- F. $m\angle A = 45^\circ$
- G. $m\angle A = 30^\circ$
- H. $m\angle A = 55^\circ$
- J. $m\angle A = 35^\circ$



5. Triangle DEF is shown below. Which of the following equations could be used to find the value of x ?

- A. $x + 37 + 49 = 360$
- B. $x + 86 = 180$
- C. $180 - 90 = x$
- D. $86 - x = 180$



1. (A) (B) (C) <input checked="" type="radio"/>
2. <input checked="" type="radio"/> (G) (H) (J)
3. (A) (B) (C) <input checked="" type="radio"/>
4. <input checked="" type="radio"/> (G) (H) (J)
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9. (A) (B) <input checked="" type="radio"/> (D)
10. Use the grid below.
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2D GEOMETRY

QUICK CHECK

Name _____ Answer Key _____
 Date _____ Pd _____

1. In PE a parachute is laid out on the gym floor. The parachute has a radius of 16 feet. Which measurement is closest to the circumference of the parachute in feet?

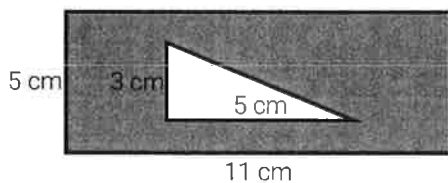
- A. 100.48 ft² B. 198.4 ft² C. 49.6 ft² D. 803.84 ft²

2. A coffee shop sign is in the shape of a circle. The sign measures 18 inches across in diameter. Which measurement is closest to the area of the sign in square inches?



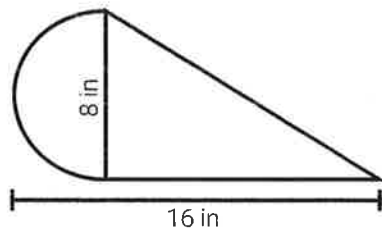
- F. 56.52 in² G. 101.36 in² H. 188.78 in² J. 254.34 in²

3. A triangle is inscribed in a rectangle, as shown below. What is the area of the shaded region?



- A. 40 cm² B. 62.5 cm² C. 47.5 cm² D. 22.75 cm²

4. Using various puzzle pieces, Marco forms the figure below. What is the best estimate of the area of the figure?



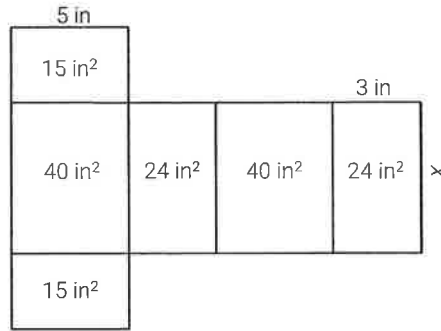
- F. 146 in² G. 73 in² H. 57 in² J. 123 in²

1.	<input checked="" type="radio"/>	<input type="radio"/> (B)	<input type="radio"/> (C)	<input type="radio"/> (D)			
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3.	<input type="radio"/> (A)	<input type="radio"/> (B)	<input checked="" type="radio"/>	<input type="radio"/> (D)			
4.	<input type="radio"/> (F)	<input checked="" type="radio"/>	<input type="radio"/> (H)	<input type="radio"/> (J)			
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	2	2	2	<input checked="" type="radio"/>		2	2
	3	3	3	3		3	3
	4	4	<input checked="" type="radio"/>	4		4	4
	5	5	5	5		<input checked="" type="radio"/>	5
	6	6	6	6		6	6
	7	7	7	7		7	7
	8	8	8	8		8	8
	9	9	9	9		9	9

VOLUME AND SURFACE AREA QUICK CHECK

Name Answer Key
Date Pd

1. The rectangular prism below has a total surface area of 158 in^2 . Use the net below to determine the missing dimension, x .



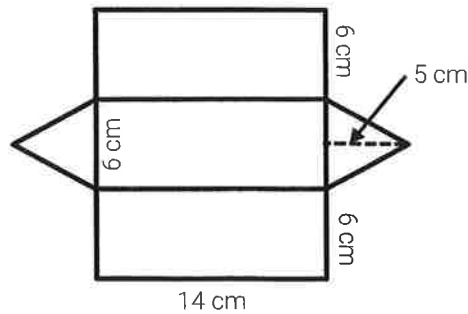
1.	(A)	<input checked="" type="radio"/>	(C)	(D)
2.	(F)	(G)	<input checked="" type="radio"/>	(J)
3.	<input checked="" type="radio"/>	(B)	(C)	(D)
4.	(F)	<input checked="" type="radio"/>	(H)	(J)
5.	(A)	(B)	<input checked="" type="radio"/>	(D)
6.	(F)	(G)	<input checked="" type="radio"/>	(J)
7.	(A)	(B)	(C)	<input checked="" type="radio"/>
8.	(F)	<input checked="" type="radio"/>	(H)	(J)

- A. 6 in B. 8 in C. 12 in D. 10 in

2. A tissue box measures 6 inches wide and 6 inches long. If the volume of the tissue box is 252 inches, then what is the height of the tissue box?

- F. 11 in
G. 4 in
H. 7 in
J. 5 in

3. The net below depicts a triangular prism. What is the total surface area of the prism?



- A. 282 cm^2 C. 312 cm^2
B. 210 cm^2 D. 624 cm^2

DATA AND STATISTICS

QUICK CHECK

Name _____ Answer Key _____
 Date _____ Pd _____

1. Below is data collected from a random sample of 80 students regarding their fitness habits. If the entire school has 600 students, then what is a reasonable estimate for the number of students who consider themselves to have an average fitness habit?

FITNESS	POOR	AVERAGE	EXCELLENT
STUDENTS	16	44	20

- A. 175 B. 120 C. 280 D. 330

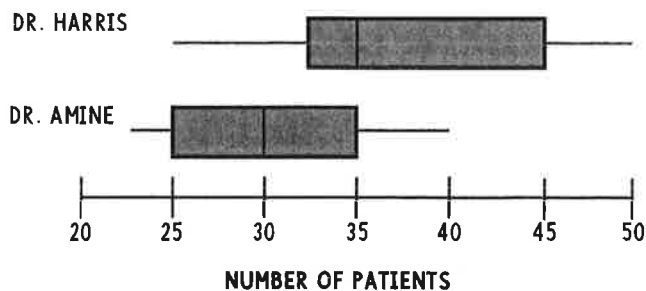
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2.	<input type="radio"/> F	<input type="radio"/> G	<input checked="" type="radio"/>	<input type="radio"/> J
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6.	<input type="radio"/> F	<input type="radio"/> G	<input checked="" type="radio"/>	<input type="radio"/> J
7.	<input type="radio"/> A	<input type="radio"/> B	<input checked="" type="radio"/>	<input type="radio"/> D
8.	<input type="radio"/> F	<input type="radio"/> G	<input type="radio"/> H	<input checked="" type="radio"/>

2. The number of teachers from two different schools are shown below. The school district would like to survey staff members about the school dress code. Based on the data, which of the samples below would be considered random?

	6 th GRADE TEACHERS	7 th GRADE TEACHERS	8 th GRADE TEACHERS
NORTH MS	16	14	19
WEST MS	11	10	12

- F. All of the teachers at North MS are sampled.
 G. The seventh grade teachers at North MS and West MS are sampled.
 H. The teachers are alphabetized by last name and every fifth teacher is sampled.
 J. The teachers who attend the school board meeting are sampled.

3. The number of patients at a doctors office is tracked over a period of 10 days. Which statement best supports the data?



- A. The data for Dr. Amine's office is more symmetrical than the data for Dr. Harris's office.
 B. The interquartile range of the two offices is the same.
 C. The median number of patients at Dr. Harris's office is less than the median number of patients at Dr. Amine's office.
 D. The range of the data for Dr. Harris's office is less than the range of the data for Dr. Amine's office.

PROBABILITY

QUICK CHECK

Name _____ Answer Key _____

Date _____ Pd _____

1. In a survey 7 out of 8 dentists recommend a ProTooth toothbrush. Based on this information, which can the toothbrush company predict about its recommendations?

- A. In a survey of 24 dentists, 18 of them will recommend a ProTooth toothbrush.
- B. In a survey of 40 dentists, 33 of them will recommend a ProTooth toothbrush.
- C. In a survey of 64 dentists, 56 of them will recommend a ProTooth toothbrush.
- D. In a survey of 88 dentists, 70 of them will recommend a ProTooth toothbrush.

2. At a pizza shop you can choose thick or thin crust, red or white sauce, and toppings of pepperoni, cheese, or vegetarian. How many different combinations are possible for someone who does not care for meat or white sauce?

- F. 3
- G. 24
- H. 9
- J. 4

3. A basket of beads contains 8 red beads, 6 yellow beads, and 6 green beads. A bead will be drawn from the basket and replaced 150 times. What is a reasonable prediction for the number of times a green bead is drawn?

- A. 45
- B. 60
- C. 36
- D. 72

4. A student takes notes in class, completes the assignments, attends tutoring, and prepares for the test. Which best represents the likelihood of the student being successful on the exam?

- F. certain
- G. likely
- H. unlikely
- J. impossible

5. The spinner below is spun two times in a row. What is the probability of spinning two prime numbers?

- A. $\frac{9}{64}$
- B. $\frac{1}{4}$
- C. $\frac{25}{64}$
- D. $\frac{1}{2}$

1.	(A)	(B)	●	(D)
2.	(F)	(G)	(H)	●
3.	●	(B)	(C)	(D)
4.	(F)	●	(H)	(J)
5.	(A)	●	(C)	(D)
6.	(F)	(G)	(H)	●
7.	●	(B)	(C)	(D)
8.	(F)	(G)	●	(J)
9.	(A)	(B)	●	(D)
10.	●	(G)	(H)	(J)

