LATEPASS.COM

Summer Math Packet

Rising 7th Graders • 60 Days • 5 Questions Per Day

Student Name:

_____

Teacher / Parent:

_____

Answers are located at the back of this packet.

How to Use This Packet

This packet covers 60 days of math practice — one page per day — aligned with 6th grade skills to keep your child sharp for 7th grade.

Tips for Success:

- Complete one day per day — no rush, no pressure!
- Work in a quiet spot with a pencil and scratch paper.
- Try all 5 questions before checking answers.
- The Answer Key is at the back — use it to check work after each day.
- Circle any missed questions and try them again the next day.

Topics Covered:

- Rational numbers — operations with integers, fractions & decimals
- Proportional relationships, unit rates, and scale drawings
- Percent applications — increase/decrease, tax, tip, discount & simple interest
- Expressions, equations & inequalities with rational coefficients
- Geometry — angle relationships, circles, and 3D figures (volume & surface area)
- Statistics — sampling, comparing data sets, and Mean Absolute Deviation
- Probability — simple & compound events, and simulations

Day 1 Rational Numbers — Operations

Name: _____

1. What is −7 + (−3)?
Answer: _____

2. What is 8 − (−5)?
Answer: _____

3. What is (−9) × 4?
Answer: _____

4. What is (−45) ÷ 9?
Answer: _____

5. What is −2.5 + 4.75?
Answer: _____

Score: ___ / 5

Day 2 Adding & Subtracting Rational Numbers

Name: _____

1. What is −3/4 + 1/2?
Answer: _____

2. What is 5/6 − (−1/3)?
Answer: _____

3. What is −2.3 − 1.7?
Answer: _____

4. What is −1 1/2 + 3/4?
Answer: _____

5. What is 0 − 6.25?
Answer: _____

Score: ___ / 5

Day 3 Multiplying & Dividing Rational Numbers

Name: _____

1. What is (−2/3) × (3/4)?
Answer: _____

2. What is (−0.5) × (−0.5)?
Answer: _____

3. What is (−4/5) ÷ (2/5)?
Answer: _____

4. What is (−1.2) × 5?
Answer: _____

5. What is 3/4 ÷ (−1/2)?
Answer: _____

Score: ___ / 5

Day 4 Absolute Value & Number Lines

Name: _____

1. What is |−12| + |5|?
Answer: _____

2. What is the distance between −4 and 6 on a number line?
Answer: _____

3. Order from least to greatest: −1.5, 2, −3, 0.5
Answer: _____

4. What is |3 − 9|?
Answer: _____

5. If a diver is at −15 feet and rises to −5 feet, how far did they rise?
Answer: _____

Score: ___ / 5

Day 5 Order of Operations with Rational Numbers

Name: _____

1. Evaluate: $-3 + 4 \times (-2)$

Answer: _____

2. Evaluate: $(-6 + 2) \div (-2)$

Answer: _____

3. Evaluate: $-2^2 + 3$

Answer: _____

4. Evaluate: $(1/2 - 3/4) \times 8$

Answer: _____

5. Evaluate: $-5 \times (3 - 7)$

Answer: _____

Score: ___ / 5

Day 6 Unit Rates with Fractions

Name: _____

1. If you travel 1/2 mile in 1/4 hour, what is your speed in mph?
   Answer: _____

2. A recipe uses 3/4 cup sugar for 2 batches. What is the unit rate per batch?
   Answer: _____

3. If 2/3 of a pound of cheese costs $4, what is the price per pound?
   Answer: _____

4. A car uses 1/8 gallon per mile. How many miles per gallon?
   Answer: _____

5. If 3 1/2 hours of work pays $42, what is the hourly rate?
   Answer: _____

Score: ___ / 5

Day 7 Proportional Relationships — Identifying

Name: _____

1. What makes two quantities 'proportional'?
Answer: _____

2. If y = 3x, is this proportional? What is the constant of proportionality?
Answer: _____

3. A table shows (2,6), (4,12), (6,18). Is this proportional? What is k?
Answer: _____

4. Is y = x + 2 proportional? Why or why not?
Answer: _____

5. If 5 items cost $20, what is the cost per item (constant of proportionality)?
Answer: _____

Score: ___ / 5

Day 8 Graphing Proportional Relationships

Name: _____

1. What point must be on the graph of any proportional relationship?

Answer: _____

2. If a graph shows (1,4), (2,8), (3,12), what is the equation?

Answer: _____

3. On a graph, what does the slope of a proportional relationship represent?

Answer: _____

4. If y = 2.5x, what is y when x = 4?

Answer: _____

5. A graph passes through (0,0) and (5,15). What is the constant of proportionality?

Answer: _____

Score: ___ / 5

Day 9 Scale Drawings

Name: _____

1. A map has a scale of 1 in = 25 miles. How many miles does 4 inches represent?

Answer: _____

2. A scale drawing is 1:50. If the actual length is 200 cm, what is the drawing length?

Answer: _____

3. A model car is built at a scale of 1:24. If the model is 8 inches long, how long is the real car?

Answer: _____

4. On a blueprint, 1 cm = 2 meters. A wall is 3.5 cm on the blueprint. How long is the actual wall?

Answer: _____

5. A scale factor of 1:100 means 1 cm on the drawing equals how many meters in real life?

Answer: _____

Score: ___ / 5

Day 10 Percent Increase & Decrease

Name: _____

1. A price increases from $50 to $60. What is the percent increase?

Answer: _____

2. A population decreases from 200 to 150. What is the percent decrease?

Answer: _____

3. An item is marked up 30% from $40. What is the new price?

Answer: _____

4. A $80 item is discounted by 15%. What is the sale price?

Answer: _____

5. If a quantity increases by 10% and then decreases by 10%, is it back to the original? Why or why not?

Answer: _____

Score: ___ / 5

Day 11 Simple Interest

Name: _____

1. What is the formula for simple interest?

Answer: _____

2. Find the simple interest on $1,000 at 5% for 2 years.

Answer: _____

3. Find the simple interest on $500 at 4% for 3 years.

Answer: _____

4. If you invest $2,000 at 3% annual interest, how much interest do you earn in 1 year?

Answer: _____

5. A loan of $1,500 at 6% for 1 year accrues how much interest?

Answer: _____

Score: ___ / 5

Day 12 Tax, Tip & Discount

Name: _____

1. A meal costs $40. With an 8% tax, what is the total?
   Answer: _____

2. If you tip 20% on a $25 bill, how much is the tip?
   Answer: _____

3. A $60 jacket is 25% off. What is the sale price?
   Answer: _____

4. A $120 item has 7% sales tax. What is the total cost?
   Answer: _____

5. If a $50 item is marked down to $35, what is the percent discount?
   Answer: _____

Score: ___ / 5

Day 13 Multi-Step Ratio & Percent Problems

Name: _____

1. A store buys shirts for $10 and marks them up 50%. What is the selling price?

Answer: _____

2. A class of 25 has 40% boys. How many girls are there?

Answer: _____

3. If a recipe is scaled up by 150%, and it originally used 2 cups flour, how much is needed now?

Answer: _____

4. A car's value depreciates 20% each year. If it's worth $20,000 now, what will it be worth next year?

Answer: _____

5. If 30% of a number is 18, what is the number?

Answer: _____

Score: ___ / 5

Day 14 Algebraic Expressions with Rational Numbers

Name: _____

1. Evaluate $2x - 5$ when $x = -3$.
   Answer: _____

2. Simplify: $-2x + 5x - 3$
   Answer: _____

3. Expand: $-3(x - 4)$
   Answer: _____

4. Simplify: $1/2x + 3/4x$
   Answer: _____

5. Evaluate $-x^2$ when $x = -2$.
   Answer: _____

Score: ___ / 5

Day 15 Two-Step Equations with Rational Numbers

Name: _____

1. Solve: $2x + 5 = -3$

Answer: _____

2. Solve: $-3x - 4 = 11$

Answer: _____

3. Solve: $x/2 - 3 = 7$

Answer: _____

4. Solve: $0.5x + 2 = 9$

Answer: _____

5. Solve: $(2/3)x = 8$

Answer: _____

Score: ___ / 5

Day 16 Multi-Step Equations

Name: _____

1. Solve: 3(x − 2) = 9
   Answer: _____

2. Solve: 2x + 3 = x + 8
   Answer: _____

3. Solve: 4(x + 1) = 2x + 10
   Answer: _____

4. Solve: −2(x − 3) = 10
   Answer: _____

5. Solve: 5x − 2 = 3x + 6
   Answer: _____

Score: ___ / 5

Day 17 Writing Equations from Word Problems

Name: _____

1. A number plus 12 is 30. Write and solve an equation.

Answer: _____

2. Twice a number minus 7 is 15. Write and solve.

Answer: _____

3. John has $15 more than twice what Mary has. If John has $45, how much does Mary have?

Answer: _____

4. A rectangle's length is 3 more than its width. If the perimeter is 26, find the width.

Answer: _____

5. The sum of three consecutive integers is 36. Find the integers.

Answer: _____

Score: ___ / 5

Day 18 Inequalities — Solving & Graphing

Name: _____

1. Solve: $2x - 3 > 7$

   Answer: _____

2. Solve: $-3x \leq 12$

   Answer: _____

3. Solve: $x/4 + 1 < 3$

   Answer: _____

4. Solve: $5 - x \geq 2$

   Answer: _____

5. Graph $x < 2$ on a number line (describe it).

   Answer: _____

Score: ___ / 5

Day 19 Inequality Word Problems

Name: _____

1. A budget allows spending at most $100. If you've spent $35, how much more (x) can you spend?

Answer: _____

2. To pass, a student needs at least 70 points. They have 52. How many more points (x) are needed?

Answer: _____

3. A elevator can carry at most 1,000 lbs. If 4 people average 150 lbs each, how much more weight (x) can it carry?

Answer: _____

4. Write an inequality: 'three times a number is at least 21'.

Answer: _____

5. Solve the inequality from the previous question.

Answer: _____

Score: ___ / 5

Day 20 Mixed Review — Weeks 1–4

Name: _____

1. What is −8 × (−3) + 2?
Answer: _____

2. Solve: 3x − 4 = 11
Answer: _____

3. A $90 jacket is 20% off. What is the sale price?
Answer: _____

4. Solve: 2x + 1 ≥ 9
Answer: _____

5. What is 1/2 − (−1/4)?
Answer: _____

Score: ___ / 5

Day 21 Angle Relationships

Name: _____

1. What is the sum of the angles in a triangle?
Answer: _____

2. If two angles are complementary and one is 35°, what is the other?
Answer: _____

3. If two angles are supplementary and one is 110°, what is the other?
Answer: _____

4. What are vertical angles?
Answer: _____

5. Two angles form a straight line. One is 3x and the other is 2x. Find x.
Answer: _____

Score: ___ / 5

Day 22 Finding Missing Angles

Name: _____

1. A triangle has angles 50° and 60°. Find the third angle.

Answer: _____

2. Two angles of a triangle are equal and the third is 90°. What is each equal angle?

Answer: _____

3. An exterior angle of a triangle is 120°. What is its adjacent interior angle?

Answer: _____

4. A quadrilateral has angles 90°, 90°, 90°. What is the fourth angle?

Answer: _____

5. If angle A and angle B are vertical angles and angle A = 75°, what is angle B?

Answer: _____

Score: ___ / 5

Day 23 Circles — Circumference

Name: _____

1. Find the circumference of a circle with radius 7 (use π ≈ 22/7).
Answer: _____

2. Find the circumference of a circle with diameter 10 (use π ≈ 3.14).
Answer: _____

3. A circle has circumference 31.4. What is its approximate radius (π ≈ 3.14)?
Answer: _____

4. If a wheel has a diameter of 2 feet, how far does it travel in one full rotation?
Answer: _____

5. Find the circumference of a circle with radius 3.5 (π ≈ 3.14).
Answer: _____

Score: ___ / 5

Day 24 Circles — Area

Name: _____

1. Find the area of a circle with radius 4 (π ≈ 3.14).
   Answer: _____

2. Find the area of a circle with diameter 10 (π ≈ 3.14).
   Answer: _____

3. A circular garden has a radius of 5 ft. What is its area?
   Answer: _____

4. If a circle's area is 28.26 sq units (π ≈ 3.14), what is its radius?
   Answer: _____

5. Find the area of a semicircle with radius 6 (π ≈ 3.14).
   Answer: _____

Score: ___ / 5

Day 25 Composite Area — Circles & Polygons

Name: _____

1. A square (side 10) has a circle (radius 5) cut from its center. Find the remaining area (π ≈ 3.14).

Answer: _____

2. A figure is a rectangle 8×4 with a semicircle (radius 2) on one end. Find the total area (π ≈ 3.14).

Answer: _____

3. Find the area of the shaded region: a 6×6 square with a 6×6 inscribed circle removed (π ≈ 3.14).

Answer: _____

4. A track is shaped like a rectangle (40×20) with semicircles (radius 10) on each end. Find the total area (π ≈ 3.14).

Answer: _____

5. Two circles have radii 3 and 5. What is the difference in their areas (π ≈ 3.14)?

Answer: _____

Score: ___ / 5

Day 26 Volume of Prisms

Name: _____

1. Find the volume of a rectangular prism 5 × 4 × 3.
Answer: _____

2. Find the volume of a triangular prism with triangle base area 12 and length 10.
Answer: _____

3. A cube has a side length of 2.5. Find its volume.
Answer: _____

4. Find the volume of a prism with a base area of 18 and height of 7.
Answer: _____

5. A rectangular prism has volume 96 and base 4×6. Find the height.
Answer: _____

Score: ___ / 5

Day 27 Surface Area of Prisms

Name: _____

1. Find the surface area of a cube with side 6.
Answer: _____

2. Find the surface area of a rectangular prism 3 × 4 × 5.
Answer: _____

3. A box is 2 × 2 × 10. Find its surface area.
Answer: _____

4. Find the surface area of a cube with side 1.5.
Answer: _____

5. A box has 6 faces with areas 20, 20, 15, 15, 12, 12. What is its surface area?
Answer: _____

Score: ___ / 5

Day 28 Cross-Sections of 3D Figures

Name: _____

1. What shape is the cross-section of a cylinder cut parallel to its base?
Answer: _____

2. What shape is the cross-section of a rectangular prism cut parallel to a face?
Answer: _____

3. What shape results from slicing a cube diagonally through opposite edges?
Answer: _____

4. What shape is the cross-section of a cone cut parallel to its base?
Answer: _____

5. What shape is the cross-section of a square pyramid cut parallel to its base?
Answer: _____

Score: ___ / 5

Day 29 Volume & Surface Area — Word Problems

Name: _____

1. A water tank is 4 ft × 3 ft × 2 ft. How much water can it hold (in cubic feet)?

Answer: _____

2. How much cardboard is needed to make a box 10 × 8 × 5 (surface area)?

Answer: _____

3. A cube-shaped gift box has a volume of 1,000 cubic cm. What is the side length?

Answer: _____

4. A swimming pool is 25 m × 10 m × 2 m. How many cubic meters of water does it hold?

Answer: _____

5. Two rectangular prisms have volumes 48 and 72 cubic units. What is the total volume?

Answer: _____

Score: ___ / 5

Day 30 Mixed Review — Weeks 5–6

Name: _____

1. Find the area of a circle with radius 10 (π ≈ 3.14).
Answer: _____

2. Two angles are supplementary; one is 45°. Find the other.
Answer: _____

3. Find the volume of a prism with base area 20 and height 6.
Answer: _____

4. Solve: 4x − 7 = 2x + 5
Answer: _____

5. What is −3.5 + (−2.5)?
Answer: _____

Score: ___ / 5

Day 31 Sampling Methods

Name: _____

1. What is a 'random sample'?

Answer: _____

2. Why is a random sample important?

Answer: _____

3. If you only survey students in the math club about favorite subjects, is this a good sample? Why or why not?

Answer: _____

4. What is a population in statistics?

Answer: _____

5. What is a sample?

Answer: _____

Score: ___ / 5

Day 32 Comparing Data Sets

Name: _____

1. Two classes have the same mean test score, but Class A has a smaller range. What does this suggest?

Answer: _____

2. If the median of data set A is higher than data set B, what does that suggest?

Answer: _____

3. What does Mean Absolute Deviation (MAD) measure?

Answer: _____

4. If two data sets have means 50 and 55, and MADs of 2 and 10, which set is more consistent?

Answer: _____

5. Why might you compare medians instead of means for skewed data?

Answer: _____

Score: ___ / 5

Day 33 Probability of Simple Events

Name: _____

1. A bag has 4 red, 3 blue, 2 green marbles. What is P(blue)?
Answer: _____

2. What is the probability of rolling a 1 or 6 on a standard die?
Answer: _____

3. If P(event) = 0.25, what is the probability the event does NOT happen?
Answer: _____

4. A spinner has 10 equal sections numbered 1–10. What is P(even number)?
Answer: _____

5. Out of 50 trials, an event happened 20 times. What is the experimental probability?
Answer: _____

Score: ___ / 5

Day 34 Probability of Compound Events

Name: _____

1. A coin is flipped twice. What is P(two heads)?
Answer: _____

2. A bag has 2 red and 3 blue marbles. If you draw 2 (with replacement), what is P(both red)?
Answer: _____

3. How many outcomes are possible when rolling 2 dice?
Answer: _____

4. What is P(rolling a sum of 7) with two dice?
Answer: _____

5. A coin is flipped and a die is rolled. How many total outcomes are there?
Answer: _____

Score: ___ / 5

Day 35 Mixed Review — Week 7

Name: _____

1. What is P(rolling an odd number) on a standard die?
Answer: _____

2. What does it mean if Class B's MAD is larger than Class A's?
Answer: _____

3. Solve: −2x + 5 = 13
Answer: _____

4. Find the surface area of a cube with side 8.
Answer: _____

5. What is 60% of 150?
Answer: _____

Score: ___ / 5

Day 36 Factoring Expressions

Name: _____

1. Factor: 6x + 9
   Answer: _____

2. Factor: 12x − 8
   Answer: _____

3. Factor: 4x + 4y
   Answer: _____

4. Factor: 15x + 25
   Answer: _____

5. Factor: 9x − 18
   Answer: _____

Score: ___ / 5

Day 37 Adding & Subtracting Linear Expressions

Name: _____

1. Simplify: (3x + 2) + (5x − 4)
   Answer: _____

2. Simplify: (7x − 3) − (2x + 5)
   Answer: _____

3. Simplify: 2(x + 3) + 3(x − 1)
   Answer: _____

4. Simplify: −(4x − 5) + 2x
   Answer: _____

5. Simplify: (1/2)x + (3/2)x − 4
   Answer: _____

Score: ___ / 5

Day 38 Equivalent Expressions

Name: _____

1. Are 2(x + 3) and 2x + 6 equivalent?
   Answer: _____

2. Are 3x + 4 and 4 + 3x equivalent? Why?
   Answer: _____

3. Is x^2 equivalent to 2x? Test with x = 3.
   Answer: _____

4. Simplify 4x − x to show it equals 3x.
   Answer: _____

5. Are 5(2x − 1) and 10x − 5 equivalent?
   Answer: _____

Score: ___ / 5

Day 39 Solving Equations — Variables on Both Sides

Name: _____

1. Solve: 5x + 2 = 2x + 11
   Answer: _____

2. Solve: 3x − 4 = x + 8
   Answer: _____

3. Solve: 7 − 2x = 3x − 8
   Answer: _____

4. Solve: 4(x − 1) = 2(x + 3)
   Answer: _____

5. Solve: 6x + 5 = 4x + 17
   Answer: _____

Score: ___ / 5

Day 40 Mixed Review — Weeks 7–8

Name: _____

1. Factor: 14x + 21
Answer: _____

2. Simplify: (2x − 5) + (3x + 9)
Answer: _____

3. Solve: 3x − 1 = x + 9
Answer: _____

4. A bag has 6 marbles, 2 of which are red. What is P(red)?
Answer: _____

5. What is −15 ÷ (−3)?
Answer: _____

Score: ___ / 5

Day 41 Drawing Geometric Shapes from Conditions

Name: _____

1. Can you draw a triangle with sides 3, 4, and 8? Why or why not?
Answer: _____

2. Can a triangle have sides 5, 6, and 10?
Answer: _____

3. If two angles of a triangle are given as 40° and 60°, what is the third angle?
Answer: _____

4. How many different triangles can be drawn with three given angles that sum to 180°?
Answer: _____

5. What condition must be true for three side lengths to form a triangle?
Answer: _____

Score: ___ / 5

Day 42 Similar Figures & Scale Factor

Name: _____

1. If a scale factor is 2, and the original side is 5, what is the new side length?

Answer: _____

2. Two similar rectangles have a scale factor of 3. If the smaller has an area of 4, what is the larger's area?

Answer: _____

3. Two triangles are similar with a scale factor of 1/2. If one side of the larger triangle is 12, what is the corresponding side of the smaller?

Answer: _____

4. If two figures are similar, what is true about their corresponding angles?

Answer: _____

5. A photo is enlarged with a scale factor of 4. If the original is 3 in × 5 in, what are the new dimensions?

Answer: _____

Score: ___ / 5

Day 43 Volume of Prisms with Fractional Edge Lengths

Name: _____

1. Find the volume of a prism 2 1/2 × 4 × 3.
Answer: _____

2. Find the volume of a cube with side 1 1/2.
Answer: _____

3. A box is 3.5 × 2 × 4. What is its volume?
Answer: _____

4. Find the volume of a prism with base 1/2 × 1/2 and height 8.
Answer: _____

5. A rectangular prism has volume 45 and dimensions 3 × 5 × h. Find h.
Answer: _____

Score: ___ / 5

Day 44 Word Problems — Geometry Applications

Name: _____

1. A circular pizza has a radius of 8 inches. What is its area (π ≈ 3.14)?

Answer: _____

2. A rectangular room is 12 ft × 10 ft. How many square feet of carpet are needed?

Answer: _____

3. A cylindrical can has a circular base with radius 3. What is the area of the base (π ≈ 3.14)?

Answer: _____

4. A triangular garden has a base of 10 m and height of 6 m. What is its area?

Answer: _____

5. A fence is needed around a circular garden with diameter 14 ft. How much fencing (circumference), using π ≈ 22/7?

Answer: _____

Score: ___ / 5

Day 45 Mixed Review — Week 9

Name: _____

1. Can a triangle have sides 2, 2, and 5?

Answer: _____

2. Two similar squares have a scale factor of 3. If the small one has area 9, what is the big one's area?

Answer: _____

3. Find the volume of a prism 1.5 × 2 × 4.

Answer: _____

4. Solve: 2x + 7 = 19

Answer: _____

5. What is 5/8 of 24?

Answer: _____

Score: ___ / 5

Day 46 Direct Variation

Name: _____

1. What is the equation form of direct variation?

Answer: _____

2. If y varies directly with x, and y = 12 when x = 4, find k.

Answer: _____

3. Using y = 3x, find y when x = 7.

Answer: _____

4. If 5 gallons of gas costs $17.50, what is the cost per gallon (k)?

Answer: _____

5. Does the equation y = 2x + 1 represent direct variation? Why or why not?

Answer: _____

Score: ___ / 5

Day 47 Two-Step Equation Word Problems

Name: _____

1. A taxi charges a $3 flat fee plus $2 per mile. If the total is $17, how many miles?
Answer: _____

2. Jenna has $25 and earns $8 per hour babysitting. How many hours to have $73?
Answer: _____

3. A number tripled and then decreased by 4 equals 20. Find the number.
Answer: _____

4. A rectangle's length is twice its width. If the perimeter is 36, find the width.
Answer: _____

5. A phone plan costs $20 plus $0.10 per text. If the bill is $35, how many texts?
Answer: _____

Score: ___ / 5

Day 48 Percent Error & Estimation

Name: _____

1. What is the formula for percent error?

Answer: _____

2. An estimate is 48, but the actual value is 50. What is the percent error?

Answer: _____

3. A measurement is recorded as 9.5 cm, but the actual length is 10 cm. What is the percent error?

Answer: _____

4. If the percent error is 0% , what does that mean?

Answer: _____

5. An estimate of 110 has a 10% error. What could the actual value be?

Answer: _____

Score: ___ / 5

Day 49 Multi-Step Real-World Problems

Name: _____

1. A school has 600 students. 45% participate in sports. How many students is that?

Answer: _____

2. A rectangular pool is 20 ft by 12 ft. A deck of uniform width 2 ft surrounds it. What is the total area including the deck?

Answer: _____

3. A recipe for 6 servings uses 1 1/2 cups of rice. How much rice for 9 servings?

Answer: _____

4. A car travels 240 miles using 8 gallons of gas. How far can it travel on 12 gallons at the same rate?

Answer: _____

5. A jacket's price increased from $50 to $65. What is the percent increase?

Answer: _____

Score: ___ / 5

Day 50 Mixed Review — Week 10

Name: _____

1. If y = 4x represents direct variation, find x when y = 24.
Answer: _____

2. Solve: 5x − 3 = 2x + 12
Answer: _____

3. What is the percent error if an estimate of 95 has an actual value of 100?
Answer: _____

4. Find the volume of a box 6 × 1/2 × 4.
Answer: _____

5. What is −4 × (−4) × (−1)?
Answer: _____

Score: ___ / 5

Day 51 Mean Absolute Deviation (MAD)

Name: _____

1. What does MAD measure?
Answer: _____

2. Find the mean of: 2, 4, 6, 8.
Answer: _____

3. Using the mean of 5, find the absolute deviations for 2, 4, 6, 8.
Answer: _____

4. Find the MAD of 2, 4, 6, 8 (mean = 5, deviations 3,1,1,3).
Answer: _____

5. If a data set has a small MAD, what does that tell you?
Answer: _____

Score: ___ / 5

Day 52 Making Inferences from Samples

Name: _____

1. If 30% of a random sample of 100 prefers chocolate, what would you predict for a population of 1,000?

Answer: _____

2. Why are larger sample sizes generally more reliable?

Answer: _____

3. A survey of 50 students found 40 like recess. What percent is this, and how many of 500 students might agree?

Answer: _____

4. What can go wrong if a sample is not randomly selected?

Answer: _____

5. If two different random samples give slightly different results, why might that happen?

Answer: _____

Score: ___ / 5

Day 53 Box Plots & Data Comparison

Name: _____

1. If Q1 = 20 and Q3 = 35, what is the IQR?

Answer: _____

2. If two box plots have the same median but different IQRs, what does the larger IQR indicate?

Answer: _____

3. What part of the data is shown by the whiskers in a box plot?

Answer: _____

4. If the median is closer to Q1 than Q3, what does that suggest about the data's distribution?

Answer: _____

5. A box plot shows min=5, Q1=10, median=15, Q3=20, max=30. What is the range?

Answer: _____

Score: ___ / 5

Day 54 Probability — Simulations

Name: _____

1. If you flip a coin 100 times and get 53 heads, what is the experimental probability of heads?

Answer: _____

2. How does experimental probability differ from theoretical probability?

Answer: _____

3. If a die is rolled 60 times, how many times would you theoretically expect to roll a 4?

Answer: _____

4. A spinner with 4 equal sections is spun 40 times. About how many times should each section come up?

Answer: _____

5. If theoretical probability of an event is 1/5, and you run 200 trials, how many successes are expected?

Answer: _____

Score: ___ / 5

Day 55 Mixed Review — Week 11

Name: _____

1. Find the MAD of: 3, 5, 7, 9 (mean = 6).
Answer: _____

2. Solve: −4x + 9 = 1
Answer: _____

3. If Q1 = 8 and Q3 = 22, find the IQR.
Answer: _____

4. A spinner has 5 sections. After 100 spins, how many times should section A appear (theoretically)?
Answer: _____

5. What is 7/9 − 1/3?
Answer: _____

Score: ___ / 5

Day 56 Comprehensive Review I

Name: _____

1. Solve: 2(x − 3) = 4x − 10
Answer: _____

2. Find the area of a circle with radius 6 (π ≈ 3.14).
Answer: _____

3. What is −5/6 + 1/3?
Answer: _____

4. A $200 item is discounted 35%. What is the new price?
Answer: _____

5. What is the volume of a cube with side 2.5?
Answer: _____

Score: ___ / 5

Day 57 Comprehensive Review II

Name: _____

1. Solve the inequality: $3x - 5 \leq 10$

Answer: _____

2. Two angles are complementary; one is 72°. Find the other.

Answer: _____

3. What is -9×0.5?

Answer: _____

4. Find the simple interest on $800 at 4% for 2 years.

Answer: _____

5. What is the MAD of: 10, 12, 14, 16 (mean = 13)?

Answer: _____

Score: ___ / 5

Day 58 Comprehensive Review III

Name: _____

1. Factor: 18x + 24

Answer: _____

2. A scale drawing uses 1 cm = 5 m. A wall is 4 cm on the drawing. How long is the real wall?

Answer: _____

3. What is the probability of rolling a sum of 2 with two dice?

Answer: _____

4. Solve: −2(x + 4) = −10

Answer: _____

5. Find the surface area of a box 2 × 3 × 6.

Answer: _____

Score: ___ / 5

Day 59 Comprehensive Review IV

Name: _____

1. What is −12 ÷ (−4) + 3?
Answer: _____

2. A jacket's price went from $40 to $50. What is the percent increase?
Answer: _____

3. Solve: 5x + 2 = 3x + 14
Answer: _____

4. Find the circumference of a circle with radius 14 (π ≈ 22/7).
Answer: _____

5. What is the IQR if Q1=15, Q3=35?
Answer: _____

Score: ___ / 5

Day 60 Day 60 — Ready for 7th Grade! 🎉

Name: _____

1. Solve: 3(x − 1) + 2x = 17
Answer: _____

2. Find the area of a circle with diameter 20 (π ≈ 3.14).
Answer: _____

3. What is −3/4 × (−2/3)?
Answer: _____

4. A $150 item is marked up 20% then discounted 10%. What is the final price?
Answer: _____

5. Find the volume of a prism 2 1/2 × 4 × 6.
Answer: _____

Score: ___ / 5

✅ ANSWER KEY

LatePass.com Summer Math Packet — Rising 7th Grade

Check your answers after completing each day!

Day 1 Rational Numbers — Operations

1	−10
2	13
3	−36
4	−5
5	2.25

Day 2 Adding & Subtracting Rational Numbers

1	−1/4
2	7/6 (or 1 1/6)
3	−4
4	−3/4
5	−6.25

Day 3 Multiplying & Dividing Rational Numbers

1	−1/2
2	0.25
3	−2
4	−6
5	−3/2 (or −1 1/2)

Day 4 Absolute Value & Number Lines

1	17
2	10
3	−3, −1.5, 0.5, 2
4	6
5	10 feet

Day 5 Order of Operations with Rational Numbers

1	−11
2	2
3	−1
4	−2
5	20

Day 6 Unit Rates with Fractions

1	2 mph
2	3/8 cup per batch
3	$6 per pound
4	8 miles per gallon
5	$12 per hour

Day 7 Proportional Relationships — Identifying

1	Their ratio is constant (y = kx for some constant k)
2	Yes; k = 3
3	Yes; k = 3
4	No — it doesn't pass through the origin (when x=0, y=2, not 0)
5	$4 per item

Day 8 Graphing Proportional Relationships

1	The origin (0, 0)
2	y = 4x
3	The constant of proportionality (unit rate)
4	y = 10
5	3

Day 9 Scale Drawings

1	100 miles
2	4 cm
3	192 inches (16 feet)
4	7 meters
5	1 meter

Day 10 Percent Increase & Decrease

1	20%
2	25%
3	$52
4	$68
5	No — the percent decrease is applied to a larger number, so the result is slightly less than the original

Day 11 Simple Interest

1	I = Prt (Principal × rate × time)
2	$100
3	$60
4	$60
5	$90

Day 12 Tax, Tip & Discount

1	$43.20
2	$5
3	$45
4	$128.40
5	30%

Day 13 Multi-Step Ratio & Percent Problems

1	$15
2	15 girls
3	3 cups
4	$16,000
5	60

Day 14 Algebraic Expressions with Rational Numbers

1	−11
2	3x − 3
3	−3x + 12
4	5/4x (or 1 1/4x)
5	−4

Day 15 Two-Step Equations with Rational Numbers

1	x = −4
2	x = −5
3	x = 20
4	x = 14
5	x = 12

Day 16 Multi-Step Equations

1	x = 5
2	x = 5
3	x = 3
4	x = −2
5	x = 4

Day 17 Writing Equations from Word Problems

1	x + 12 = 30; x = 18
2	2x − 7 = 15; x = 11
3	2m + 15 = 45; m = 15
4	2w + 2(w+3) = 26 → w = 5
5	11, 12, 13

Day 18 Inequalities — Solving & Graphing

1	x > 5
2	x ≥ −4
3	x < 8
4	x ≤ 3
5	Open circle at 2, arrow pointing left

Day 19 Inequality Word Problems

1	35 + x ≤ 100; x ≤ 65
2	52 + x ≥ 70; x ≥ 18
3	600 + x ≤ 1000; x ≤ 400
4	3x ≥ 21
5	x ≥ 7

Day 20 Mixed Review — Weeks 1–4

1	26
2	x = 5
3	$72
4	x ≥ 4
5	3/4

Day 21 Angle Relationships

1	180°
2	55°
3	70°
4	A pair of opposite angles formed by two intersecting lines; they're equal
5	x = 36 (since 3x + 2x = 180)

Day 22 Finding Missing Angles

1	70°
2	45°
3	60°
4	90° (sum = 360°)
5	75°

Day 23 Circles — Circumference

1	44 units
2	31.4 units
3	5 units
4	≈ 6.28 feet
5	≈ 21.98 units

Day 24 Circles — Area

1	≈ 50.24 sq units
2	≈ 78.5 sq units
3	≈ 78.5 sq ft
4	3 units
5	≈ 56.52 sq units

Day 25 Composite Area — Circles & Polygons

1	100 − 78.5 = 21.5 sq units
2	32 + 6.28 = 38.28 sq units
3	36 − 28.26 = 7.74 sq units
4	800 + 314 = 1,114 sq units
5	78.5 − 28.26 = 50.24 sq units

Day 26 Volume of Prisms

1	60 cubic units
2	120 cubic units
3	15.625 cubic units
4	126 cubic units
5	4 units

Day 27 Surface Area of Prisms

1	216 sq units
2	94 sq units
3	88 sq units
4	13.5 sq units
5	94 sq units

Day 28 Cross-Sections of 3D Figures

1	A circle
2	A rectangle
3	A rectangle (or square, depending on the cut)
4	A circle
5	A square

Day 29 Volume & Surface Area — Word Problems

1	24 cubic feet
2	340 sq units
3	10 cm
4	500 cubic meters
5	120 cubic units

Day 30 Mixed Review — Weeks 5–6

1	314 sq units
2	135°
3	120 cubic units
4	x = 6
5	−6

Day 31 Sampling Methods

1	A sample where every member of the population has an equal chance of being selected
2	It helps ensure the sample represents the whole population fairly
3	No — it's biased because math club members may favor math
4	The entire group being studied
5	A subset of the population used to make inferences about the whole

Day 32 Comparing Data Sets

1	Class A's scores are more consistent (less variability)
2	Data set A tends to have higher values overall
3	The average distance of data points from the mean (a measure of variability)
4	The first set (MAD = 2)
5	The median isn't affected by outliers, giving a better center estimate

Day 33 Probability of Simple Events

1	3/9 (or 1/3)
2	2/6 (or 1/3)
3	0.75
4	5/10 (or 1/2)
5	20/50 (or 2/5, or 0.4)

Day 34 Probability of Compound Events

1	1/4
2	(2/5)×(2/5) = 4/25
3	36
4	6/36 (or 1/6)
5	12 (2 × 6)

Day 35 Mixed Review — Week 7

1	1/2
2	Class B's data has more variability/spread
3	x = −4
4	384 sq units
5	90

Day 36 Factoring Expressions

1	3(2x + 3)
2	4(3x − 2)
3	4(x + y)
4	5(3x + 5)
5	9(x − 2)

Day 37 Adding & Subtracting Linear Expressions

1	8x − 2
2	5x − 8
3	5x + 3
4	−2x + 5
5	2x − 4

Day 38 Equivalent Expressions

1	Yes
2	Yes — addition is commutative
3	No — $x^2 = 9$, but $2x = 6$
4	$4x - x = 3x$ ✓
5	Yes

Day 39 Solving Equations — Variables on Both Sides

1	x = 3
2	x = 6
3	x = 3
4	x = 5
5	x = 6

Day 40 Mixed Review — Weeks 7–8

1	7(2x + 3)
2	5x + 4
3	x = 5
4	1/3
5	5

Day 41 Drawing Geometric Shapes from Conditions

1	No — the sum of the two shorter sides (3+4=7) must be greater than the longest side (8); it isn't
2	Yes — 5 + 6 = 11 > 10
3	80°
4	Infinitely many (similar triangles of different sizes)
5	The sum of any two sides must be greater than the third side (Triangle Inequality)

Day 42 Similar Figures & Scale Factor

1	10
2	36 (area scales by the square of the scale factor)
3	6
4	They are equal
5	12 in × 20 in

Day 43 Volume of Prisms with Fractional Edge Lengths

1	30 cubic units
2	3.375 cubic units
3	28 cubic units
4	2 cubic units
5	h = 3

Day 44 Word Problems — Geometry Applications

1	≈ 200.96 sq inches
2	120 sq feet
3	≈ 28.26 sq units
4	30 sq meters
5	44 feet

Day 45 Mixed Review — Week 9

1	No — 2 + 2 = 4 < 5
2	81
3	12 cubic units
4	x = 6
5	15

Day 46 Direct Variation

1	y = kx
2	k = 3
3	y = 21
4	$3.50 per gallon
5	No — it doesn't pass through the origin

Day 47 Two-Step Equation Word Problems

1	7 miles
2	6 hours
3	8
4	6
5	150 texts

Day 48 Percent Error & Estimation

1	|estimate − actual| / actual × 100%
2	4%
3	5%
4	The estimate was exactly correct
5	100 (since 10/100 = 10%)

Day 49 Multi-Step Real-World Problems

1	270 students
2	24 × 16 = 384 sq feet
3	2 1/4 cups
4	360 miles
5	30%

Day 50 Mixed Review — Week 10

1	x = 6
2	x = 5
3	5%
4	12 cubic units
5	−16

Day 51 Mean Absolute Deviation (MAD)

1	The average distance between each data point and the mean
2	5
3	3, 1, 1, 3
4	2
5	The data points are close to the mean (low variability)

Day 52 Making Inferences from Samples

1	About 300 people
2	They tend to better represent the population and reduce the impact of outliers
3	80%; about 400 students
4	The results may be biased and not represent the whole population
5	Sampling variability — different samples can yield slightly different estimates

Day 53 Box Plots & Data Comparison

1	15
2	Greater variability in the middle 50% of the data
3	The minimum and maximum values (outside the IQR)
4	The data may be skewed right (more spread in the upper half)
5	25

Day 54 Probability — Simulations

1	53/100 (0.53)
2	Experimental is based on actual trials/results; theoretical is based on possible outcomes
3	10 times (1/6 of 60)
4	10 times each
5	40

Day 55 Mixed Review — Week 11	
1	2
2	x = 2
3	14
4	20 times
5	4/9

Day 56 Comprehensive Review I	
1	x = 2
2	≈ 113.04 sq units
3	−1/2
4	$130
5	15.625 cubic units

Day 57 Comprehensive Review II	
1	x ≤ 5
2	18°
3	−4.5
4	$64
5	1.5

Day 58 Comprehensive Review III	
1	6(3x + 4)
2	20 meters
3	1/36
4	x = 1
5	72 sq units

Day 59 Comprehensive Review IV	
1	6
2	25%
3	x = 6
4	88 units
5	20

Day 60 Day 60 — Ready for 7th Grade! 🎉	
1	x = 4
2	≈ 314 sq units
3	1/2
4	$162
5	60 cubic units