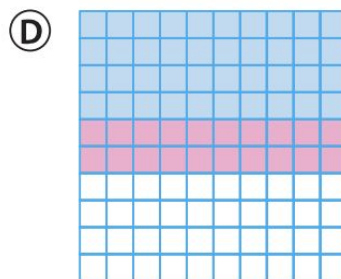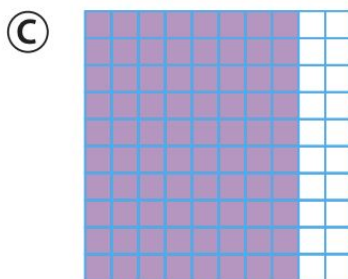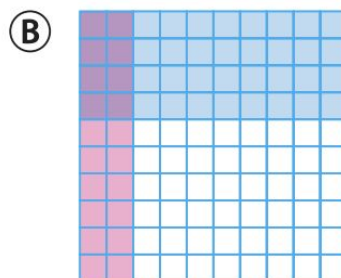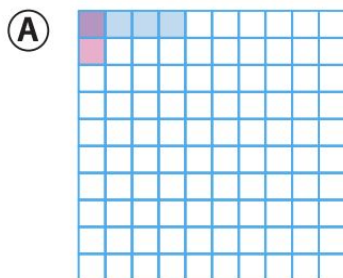# Summer Math Packet
Entering 6th Grade

Please complete the cumulative practice packet. You may turn it into your 5th Grade teacher from the 2022-23 school year in September. You **MUST** show work for the following problems:

3, 4, 7, 8, 10, 13, 15, 16, 18

1. Which model shows 0.4×0.2?

Ⓐ

Ⓑ

Ⓒ

Ⓓ

---

2. A triangle has angle measures of $82°$, $53°$, and $45°$. Classify the triangle by its angles.

Ⓐ acute

Ⓑ equiangular

Ⓒ obtuse

Ⓓ right

---

3. Which expressions have an estimated difference of $\frac{1}{2}$?

☐ $\frac{11}{12} - \frac{7}{8}$

☐ $\frac{9}{10} - \frac{1}{5}$

☐ $\frac{4}{3} - \frac{1}{2}$

☐ $\frac{15}{16} - \frac{4}{9}$

☐ $\frac{5}{4} - \frac{11}{20}$

☐ $\frac{1}{8} - \frac{1}{6}$

---

4. A rectangular prism has a volume of 288 cubic centimeters. The height of the prism is 8 centimeters. The base is a square. What is a side length of the base?
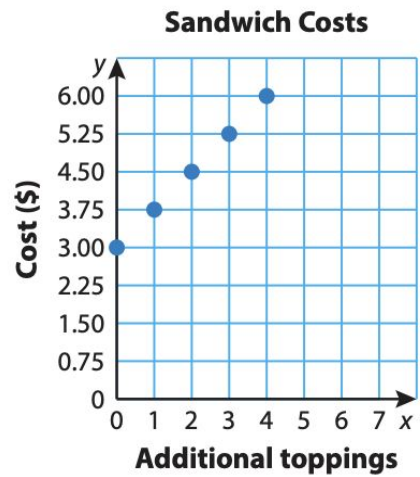
Ⓐ 6 cm

Ⓑ 9 cm

Ⓒ 18 cm

Ⓓ 36 cm

5. A sandwich at a food stand costs $3.00. Each additional topping costs the same extra amount. The coordinate plane shows the costs, in dollars, of sandwiches with different numbers of additional toppings. What is the cost of a sandwich with 3 additional toppings?

Sandwich Costs

Ⓐ $0.00

Ⓑ $3.00

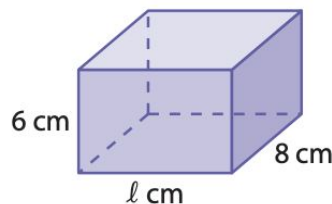Ⓒ $5.25

Ⓓ $6.00

---

6. Which statements are *true*?

☐ All rhombuses are rectangles.

☐ All squares and rectangles are parallelograms.

☐ All squares are rhombuses.

☐ Every trapezoid is a quadrilateral.

---

7. Your friend makes a volcano for a science project. She uses 10 cups of vinegar. How many pints of vinegar does he use?

Ⓐ 2 pints

Ⓑ 5 pints

Ⓒ 20 pints

Ⓓ 40 pints

---

8. The volume of the rectangular prism is 432 cubic centimeters. What is the length of the prism?

6 cm
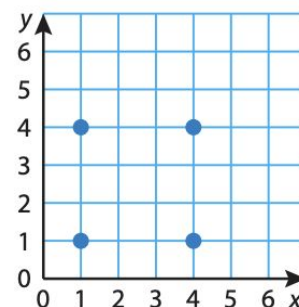
8 cm

ℓ cm

Ⓐ 9 cm

Ⓑ 18 cm

Ⓒ 384 cm

Ⓓ 418 cm

9. Descartes draws a pentagon by plotting another point in the coordinate plane and connecting the points. Which coordinates could he use?

☐ (0, 3) ☐ (2, 4)

☐ (3, 5) ☐ (6, 2)

---

10. Newton rides to the dog park in a taxi. He owes the driver $12. He calculates the driver's tip by multiplying $12 by 0.15. How much does he pay the driver, including the tip?

Ⓐ $1.80 Ⓑ $10.20

Ⓒ $13.80 Ⓓ $30.00

---

11. A quadrilateral has four sides with the same length, two pairs of parallel sides, and four 90° angles. Classify the quadrilateral in as many ways as possible.

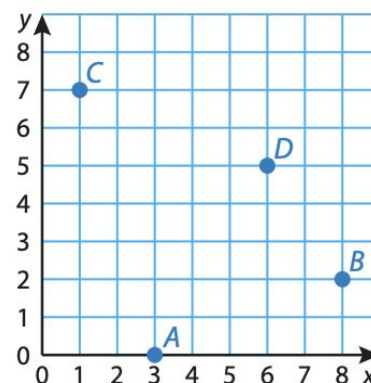☐ square ☐ trapezoid

☐ parallelogram ☐ rhombus

---

12. Which ordered pair represents the location of a point shown in the coordinate plane?

Ⓐ (0, 3) Ⓑ (1, 7)

Ⓒ (5, 6) Ⓓ (2, 8)

---

13. What is the product of 5,602 and 17?

14. Which pair of points do *not* lie on a line that is perpendicular to the *x*-axis?

Ⓐ (1, 6) and (1, 8)
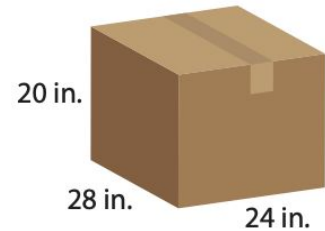
Ⓑ (4, 0) and (4, 4)

Ⓒ (5, 1) and (5, 3)

Ⓓ (7, 2) and (6, 2)

---

15. Newton has a gift in the shape of a rectangular prism that has a volume of 10,500 cubic inches. The box he uses to ship the gift is shown.

Think Solve Explain

20 in.

28 in.

24 in.

Part A What is the volume of the box?

Part B What is the volume, in cubic inches, of the space inside the box that is *not* taken up by the gift? Explain.

---

16. Which expressions have a product greater than $\frac{5}{6}$?

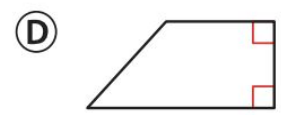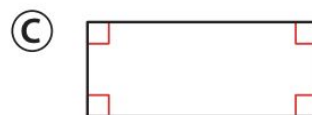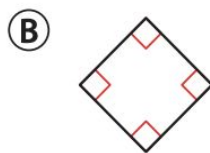☐ $\frac{5}{6} \times \frac{7}{8}$

☐ $\frac{5}{6} \times \frac{1}{3}$

☐ $\frac{5}{6} \times \frac{9}{9}$

☐ $\frac{5}{6} \times \frac{3}{2}$

☐ $\frac{5}{6} \times \frac{4}{5}$

☐ $\frac{5}{6} \times 1\frac{3}{4}$

---

17. Newton is thinking of a shape that has 4 sides, only one pair of parallel sides, and angle measures of 90°, 40°, 140°, and 90°. Which is Newton's shape?

Ⓐ

Ⓑ

Ⓒ

Ⓓ

---

18. Which rectangular prisms have a volume of 150 cubic feet?

☐ length = 2 ft, height = 25 ft, width = 3 ft

☐ length = 50 ft, height = 50 ft, width = 50 ft

☐ length = 3 ft, height = 10 ft, width = 5 ft

☐ length = 6 ft, height = 5 ft, width = 5 ft