

7

Incoming 7th Gr Summer Math Practice

Remember to show all of your work on a separate sheet(s)

Answers

Multiply or divide.

1. $4.5 \div 0.9$ 2. $34.1 \div 5.5$ 3. $2.7(7.8)$

4. $\frac{6}{7} \cdot \frac{5}{9}$ 5. $\frac{4}{5} \div \frac{8}{11}$ 6. $\frac{3}{8} \cdot \frac{4}{9}$

7. You need to buy 5 notebooks for your classes at school. Each notebook costs \$2.79. What is the total cost of 5 notebooks before tax?

Complete the statement using $<$, $>$, or $=$.

8. $\frac{4 \text{ tables}}{3 \text{ groups}}$ _____ $\frac{6 \text{ tables}}{5 \text{ groups}}$ 9. $\frac{66 \text{ pages}}{2 \text{ hours}}$ _____ $\frac{99 \text{ pages}}{3 \text{ hours}}$

10. You have \$50 in your savings account. Each week you deposit \$5 in your account. Write an expression that models the situation.

Solve the equation.

11. $x + 5 = 10$ 12. $x - 2 = 6$ 13. $x - 1 = 9$

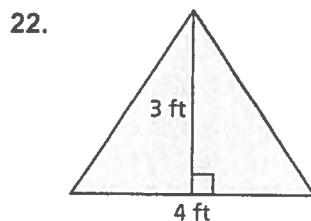
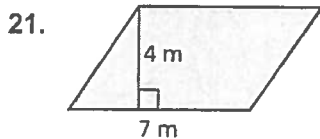
14. $7 + x = 13$ 15. $5x = 65$ 16. $\frac{x}{3} = 11$

17. What is the surface area of a rectangular prism with length 5 centimeters, width 2 centimeters, and height 3 centimeters?

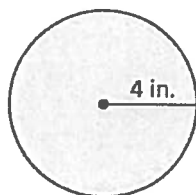
Tell whether the two expressions are equivalent.

18. $5 + 3b$; $3b + 5$ 19. $5(h + 7)$; $5h + 35$ 20. $(2 - c)4$; $2 - 4c$

Find the area of the figure.



23. What is the circumference of the circle? Use 3.14 for π .



1. _____
 2. _____
 3. _____
 4. _____
 5. _____
 6. _____
 7. _____
 8. **See left.**
 9. **See left.**
 10. _____
 11. _____
 12. _____
 13. _____
 14. _____
 15. _____
 16. _____
 17. _____
 18. _____
 19. _____
 20. _____
 21. _____
 22. _____
 23. _____

Name _____ Date _____

Write the decimal as a percent.

24. 0.89

25. 2.37

26. 0.0029

24. _____

25. _____

Write the percent as a decimal.

27. 3%

28. 78%

29. 500%

26. _____

27. _____

30. In a survey, $\frac{17}{25}$ of the people surveyed have a cat. What percent of the people surveyed have a cat?

28. _____

29. _____

Order the numbers from least to greatest.

31. $\frac{5}{8}$, 60%, 0.64

32. 34%, $\frac{4}{15}$, 0.3

33. 0.57, 5.8%, $\frac{14}{25}$

30. _____

31. _____

32. _____

Estimate the sum or product.

34. $1.52(98)$

35. $2.04(3.97)$

36. $4.42 + 5.91$

33. _____

34. _____

Find the mean, median, mode(s), and range of the data set.

37. 5, 9, 12, 3, 4, 5, 7, 14, 13

38. 1, 7, 2, 3, 9, 4, 6, 10

35. _____

36. _____

39. The following data are the numbers of customers at a coffee shop over a 10-day period.

37. _____

135, 124, 140, 122, 409, 132, 119, 128, 136, 125

Which measure of center best represents the daily average number of customers at the coffee shop? Explain your reasoning.

38. _____

Multiply or divide.

40. 56×18

41. $656 \div 41$

42. $184 \div 23$

39. _____

Write the fraction as a decimal.

43. $\frac{13}{20}$

44. $\frac{3}{8}$

45. $\frac{21}{40}$

40. _____

41. _____

42. _____

43. _____

44. _____

45. _____

Mathematics Reference Sheet

Conversions

U.S. Customary

1 foot = 12 inches
1 yard = 3 feet
1 mile = 5280 feet
1 acre \approx 43,560 square feet
1 cup = 8 fluid ounces
1 pint = 2 cups
1 quart = 2 pints
1 gallon = 4 quarts
1 gallon = 231 cubic inches
1 pound = 16 ounces
1 ton = 2000 pounds
1 cubic foot \approx 7.5 gallons

U.S. Customary to Metric

1 inch = 2.54 centimeters
1 foot \approx 0.3 meter
1 mile \approx 1.61 kilometers
1 quart \approx 0.95 liter
1 gallon \approx 3.79 liters
1 cup \approx 237 milliliters
1 pound \approx 0.45 kilogram
1 ounce \approx 28.3 grams
1 gallon \approx 3785 cubic centimeters

Time

1 minute = 60 seconds
1 hour = 60 minutes
1 hour = 3600 seconds
1 year = 52 weeks

Temperature

$$C = \frac{5}{9}(F - 32)$$

$$F = \frac{9}{5}C + 32$$

Metric

1 centimeter = 10 millimeters
1 meter = 100 centimeters
1 kilometer = 1000 meters
1 liter = 1000 milliliters
1 kiloliter = 1000 liters
1 milliliter = 1 cubic centimeter
1 liter = 1000 cubic centimeters
1 cubic millimeter = 0.001 milliliter
1 gram = 1000 milligrams
1 kilogram = 1000 grams

Metric to U.S. Customary

1 centimeter \approx 0.39 inch
1 meter \approx 3.28 feet
1 kilometer \approx 0.62 mile
1 liter \approx 1.06 quarts
1 liter \approx 0.26 gallon
1 kilogram \approx 2.2 pounds
1 gram \approx 0.035 ounce
1 cubic meter \approx 264 gallon

Number Properties

Commutative Properties of Addition and Multiplication

$$a + b = b + a$$

$$a \cdot b = b \cdot a$$

Associative Properties of Addition and Multiplication

$$(a + b) + c = a + (b + c)$$

$$(a \cdot b) \cdot c = a \cdot (b \cdot c)$$

Properties of Equality

Addition Property of Equality

$$\text{If } a = b, \text{ then } a + c = b + c.$$

Subtraction Property of Equality

$$\text{If } a = b, \text{ then } a - c = b - c.$$

Multiplication Property of Equality

$$\text{If } a = b, \text{ then } a \cdot c = b \cdot c.$$

Addition Property of Zero

$$a + 0 = a$$

Multiplication Properties of Zero and One

$$a \cdot 0 = 0$$

$$a \cdot 1 = a$$

Distributive Property:

$$a(b + c) = ab + ac$$

$$a(b - c) = ab - ac$$

Multiplicative Inverse Property

$$n \cdot \frac{1}{n} = \frac{1}{n} \cdot n = 1, n \neq 0$$

Division Property of Equality

$$\text{If } a = b, \text{ then } a \div c = b \div c, c \neq 0.$$

Properties of Inequality

Addition Property of Inequality
If $a > b$, then $a + c > b + c$.

Subtraction Property of Inequality
If $a > b$, then $a - c > b - c$.

Multiplication Property of Inequality

If $a > b$ and c is positive, then $a \cdot c > b \cdot c$.
If $a > b$ and c is negative, then $a \cdot c < b \cdot c$.

Division Property of Inequality

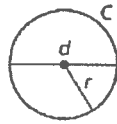
If $a > b$ and c is positive, then $a \div c > b \div c$.
If $a > b$ and c is negative, then $a \div c < b \div c$.

Circumference and Area of a Circle

$$C = \pi d \text{ or } C = 2\pi r$$

$$A = \pi r^2$$

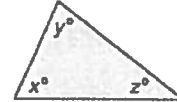
$$\pi \approx \frac{22}{7}, \text{ or } 3.14$$



Angles of Polygons

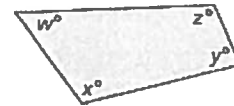
Sum of the Angle Measures of a Triangle

$$x + y + z = 180$$



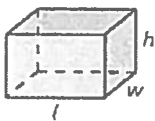
Sum of the Angle Measures of a Quadrilateral

$$w + x + y + z = 360$$

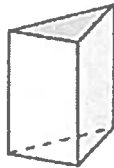


Surface Area

Prism



$$S = 2lw + 2lh + 2wh$$



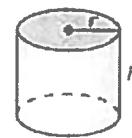
$$S = \text{areas of bases} + \text{areas of lateral faces}$$

Pyramid



$$S = \text{area of base} + \text{areas of lateral faces}$$

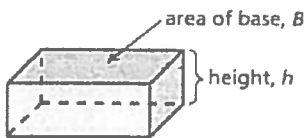
Cylinder



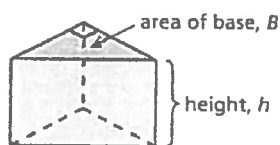
$$S = 2\pi r^2 + 2\pi rh$$

Volume

Prism

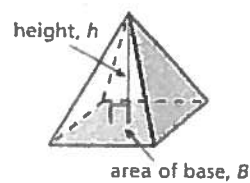


$$V = Bh$$



$$V = Bh$$

Pyramid



$$V = \frac{1}{3}Bh$$

Simple Interest

Simple interest formula

$$I = Prt$$