

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. $x - 1 = 9$

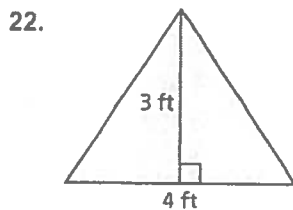
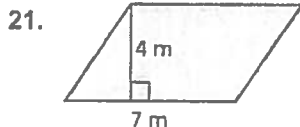
14. $7 + x = 13$ 15. $5x = 65$ 16. $\frac{x}{3} = 11$

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

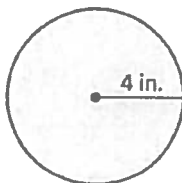
Tell whether the two expressions are equivalent.

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 _____ | Answers _____ |
|---|---------------|
| Write the decimal as a percent. | |
| 24. 0.89 | 24. _____ |
| 25. 2.37 | 25. _____ |
| 26. 0.0029 | 26. _____ |
| Write the percent as a decimal. | |
| 27. 3% | 27. _____ |
| 28. 78% | 28. _____ |
| 29. 500% | 29. _____ |
| 30. In a survey, $\frac{17}{25}$ of the people surveyed have a cat. What percent of the people surveyed have a cat? | 30. _____ |
| Order the numbers from least to greatest. | |
| 31. $\frac{5}{8}$, 60%, 0.64 | 31. _____ |
| 32. 34%, $\frac{4}{15}$, 0.3 | 32. _____ |
| 33. 0.57, 5.8%, $\frac{14}{25}$ | 33. _____ |
| Estimate the sum or product. | |
| 34. $1.52(98)$ | 34. _____ |
| 35. $2.04(3.97)$ | 35. _____ |
| 36. $4.42 + 5.91$ | 36. _____ |
| Find the mean, median, mode(s), and range of the data set. | |
| 37. 5, 9, 12, 3, 4, 5, 7, 14, 13 | 37. _____ |
| 38. 1, 7, 2, 3, 9, 4, 6, 10 | 38. _____ |
| 39. The following data are the numbers of customers at a coffee shop over a 10-day period. | 39. _____ |
| 135, 124, 140, 122, 409, 132, 119, 128, 136, 125 | 40. _____ |
| Which measure of center best represents the daily average number of customers at the coffee shop? Explain your reasoning. | 41. _____ |
| Multiply or divide. | |
| 40. 56×18 | 40. _____ |
| 41. $656 \div 41$ | 41. _____ |
| 42. $184 \div 23$ | 42. _____ |
| Write the fraction as a decimal. | |
| 43. $\frac{13}{20}$ | 43. _____ |
| 44. $\frac{3}{8}$ | 44. _____ |
| 45. $\frac{21}{40}$ | 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 $a \cdot c < b \cdot c$.

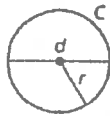
Division Property of Inequality
If $a > b$ and c is positive, then $a \div c > b \div c$.
If $a > b$ and c is negative, then $a \div c < b \div c$.

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

$$x + y + z = 180$$



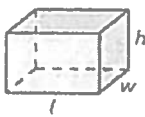
Sum of the Angle Measures of a Quadrilateral

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



Surface Area

Prism



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



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

Pyramid



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

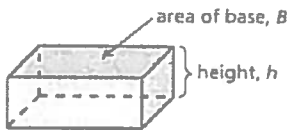
Cylinder



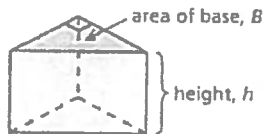
$$S = 2\pi r^2 + 2\pi rh$$

Volume

Prism

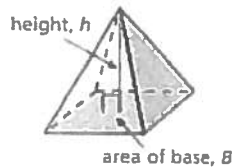


$$V = Bh$$



$$V = Bh$$

Pyramid



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

Simple Interest

Simple interest formula

$$I = Prt$$