

MATHHTASTIC

Exercise Worksheets



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ANSWERS

Add.

$$\begin{array}{r} 47 \\ + 32 \\ \hline \end{array}$$

$$\begin{array}{r} 678 \\ + 426 \\ \hline \end{array}$$

$$\begin{array}{r} 4389 \\ 3377 \\ + 1689 \\ \hline \end{array}$$

$$\begin{array}{r} 8 \\ 5 \\ + 1 \\ \hline \end{array}$$

$$\begin{array}{r} 2846 \\ + 1635 \\ \hline \end{array}$$

$$\begin{array}{r} 24,592 \\ + 46,268 \\ \hline \end{array}$$

$$\begin{array}{r} 72 \\ 94 \\ + 3 \\ \hline \end{array}$$

$$\begin{array}{r} 2504 \\ 4241 \\ + 2173 \\ \hline \end{array}$$

$$\begin{array}{r} 587,938 \\ + 629,777 \\ \hline \end{array}$$

$$\begin{array}{r} 25 \\ + 57 \\ \hline \end{array}$$

$$\begin{array}{r} 96 \\ 5748 \\ + 482 \\ \hline \end{array}$$

$$\begin{array}{r} 99,763,500 \\ + 2,827,449 \\ \hline \end{array}$$

Subtract.

1

$$\begin{array}{r} 47 \\ - 5 \\ \hline \end{array}$$

5

$$\begin{array}{r} 35 \\ - 8 \\ \hline \end{array}$$

9

$$\begin{array}{r} 776 \\ - 498 \\ \hline \end{array}$$

2

$$\begin{array}{r} 95 \\ - 31 \\ \hline \end{array}$$

6

$$\begin{array}{r} 652 \\ - 251 \\ \hline \end{array}$$

10

$$\begin{array}{r} 1904 \\ - 625 \\ \hline \end{array}$$

3

$$\begin{array}{r} 68 \\ - 62 \\ \hline \end{array}$$

7

$$\begin{array}{r} 821 \\ - 507 \\ \hline \end{array}$$

11

$$\begin{array}{r} 70,801 \\ - 62,762 \\ \hline \end{array}$$

4

$$\begin{array}{r} 87 \\ - 20 \\ \hline \end{array}$$

8

$$\begin{array}{r} 493 \\ - 37 \\ \hline \end{array}$$

12

$$\begin{array}{r} 1,344,192 \\ - 804,663 \\ \hline \end{array}$$

Multiply.

1

$$\begin{array}{r} 72 \\ \times 4 \\ \hline \end{array}$$

5

$$\begin{array}{r} 205 \\ \times 34 \\ \hline \end{array}$$

9

$$\begin{array}{r} 776 \\ \times 98 \\ \hline \end{array}$$

2

$$\begin{array}{r} 39 \\ \times 6 \\ \hline \end{array}$$

6

$$\begin{array}{r} 376 \\ \times 18 \\ \hline \end{array}$$

10

$$\begin{array}{r} 2309 \\ \times 278 \\ \hline \end{array}$$

3

$$\begin{array}{r} 81 \\ \times 57 \\ \hline \end{array}$$

7

$$\begin{array}{r} 800 \\ \times 30 \\ \hline \end{array}$$

11

$$\begin{array}{r} 3650 \\ \times 400 \\ \hline \end{array}$$

4

$$\begin{array}{r} 46 \\ \times 72 \\ \hline \end{array}$$

8

$$\begin{array}{r} 493 \\ \times 67 \\ \hline \end{array}$$

12

$$\begin{array}{r} 79,248 \\ \times 589 \\ \hline \end{array}$$

Divide. Round your answer to the hundredths place.

1

$$3 \overline{)156}$$

5

$$4 \overline{)1289}$$

9

$$28 \overline{)770}$$

2

$$7 \overline{)588}$$

6

$$9 \overline{)2230}$$

10

$$289 \overline{)5801}$$

3

$$6 \overline{)39}$$

7

$$36 \overline{)1620}$$

11

$$325 \overline{)6344}$$

4

$$5 \overline{)128}$$

8

$$61 \overline{)427}$$

12

$$76 \overline{)30,027}$$

Write in exponent form.

1 $8 \times 8 \times 8 \times 8 \times 8$

2 267×267

3 $1 \times 1 \times 1 \times 1 \times 1$

4 85

Find the value.

5 2^5

6 10^3

7 16^1

8 37^0

Calculate.

9 $3^2 + 6 - 2 \times 7$

10 $7 \times (4^3 - 6) \div 2$

11 $2^4 \div 2^3 \times 3^5$

12 $124 - 3 \times (7 + 5^2)$

13 $20 \div 5 \times 2 - (6 + 2) \times 7$

Identify which of the following are improper fractions.

1 a) $\frac{21}{2}$ b) $\frac{4}{5}$ c) $\frac{83}{126}$ d) $\frac{7}{6}$

Change the mixed numbers to improper fractions.

2 $2\frac{4}{5}$

3 $6\frac{11}{17}$

4 $12\frac{8}{45}$

5 $9\frac{3}{61}$

6 $87\frac{41}{69}$

Change the improper fractions to mixed numbers.

7 $\frac{8}{3}$

8 $\frac{10}{7}$

9 $\frac{56}{17}$

10 $\frac{132}{11}$

11 $\frac{94}{93}$

Find all of the factors.

1 6

2 7

3 45

4 20

Identify which of the following numbers are prime:

5 a) 14 b) 4 c) 11 d) 9 e) 3 f) 17

Find the prime factorization. Use exponents when applicable.

6 12

7 60

8 18

9 33

10 105

11 125

12 42

Find the LCM.

1 2 and 5

2 2, 3 and 4

3 8 and 10

4 6 and 8

5 9 and 30

6 3, 5, and 6

7 2, 6, 8 and 12

8 3, 4 and 5

9 5, 15 and 20

10 40 and 180

11 108 and 72

12 6, 8 and 36

Simplify to lowest terms.

$$1 \quad \frac{3}{18}$$

$$2 \quad \frac{15}{25}$$

$$3 \quad \frac{6}{8}$$

$$4 \quad \frac{37}{37}$$

$$5 \quad \frac{66}{99}$$

$$6 \quad \frac{35}{42}$$

$$7 \quad \frac{100}{1000}$$

$$8 \quad \frac{50}{1000}$$

$$9 \quad \frac{7}{341}$$

$$10 \quad 2 \frac{6}{30}$$

$$11 \quad \frac{36}{12}$$

$$12 \quad 4 \frac{29}{29}$$

Add or subtract as indicated. Reduce to lowest terms.

$$1 \quad \frac{12}{17} + \frac{3}{17}$$

$$2 \quad \frac{11}{12} + \frac{1}{12}$$

$$3 \quad \frac{7}{10} + \frac{2}{10} + \frac{8}{10}$$

$$4 \quad \frac{1}{2} + \frac{2}{3}$$

$$5 \quad \frac{3}{8} + \frac{1}{2}$$

$$6 \quad \frac{5}{6} + \frac{1}{4}$$

$$7 \quad \frac{8}{11} - \frac{5}{11}$$

$$8 \quad \frac{7}{16} - \frac{5}{16}$$

$$9 \quad \frac{7}{9} - \frac{2}{3}$$

$$10 \quad \frac{2}{3} - \frac{1}{6}$$

$$11 \quad \frac{47}{50} - \frac{3}{10}$$

$$12 \quad \frac{1}{2} - \frac{1}{5}$$

Add or subtract as indicated. Reduce to lowest terms.

$$1 \quad 1\frac{1}{3} + 2\frac{1}{3}$$

$$2 \quad 3\frac{7}{8} + 1\frac{5}{8}$$

$$3 \quad 22\frac{16}{17} + 4$$

$$4 \quad 16\frac{3}{10} + 5\frac{9}{100}$$

$$5 \quad 2\frac{3}{5} + \frac{9}{10}$$

$$6 \quad 5\frac{1}{4} + 3\frac{5}{8} + 2\frac{1}{2}$$

$$7 \quad 2\frac{2}{3} - \frac{1}{3}$$

$$8 \quad 6\frac{1}{2} - 3$$

$$9 \quad 10 - 3\frac{2}{3}$$

$$10 \quad 9\frac{3}{8} - 5\frac{5}{6}$$

$$11 \quad 1\frac{1}{2} - \frac{7}{10}$$

$$12 \quad 2\frac{1}{2} - 1\frac{3}{4}$$

Multiply. Reduce to lowest terms.

$$1 \quad \frac{1}{2} \times \frac{3}{4}$$

$$2 \quad \left(\frac{5}{9}\right) \left(\frac{3}{10}\right)$$

$$3 \quad \frac{15}{4} \cdot \frac{12}{5}$$

$$4 \quad 6 \times \frac{2}{3}$$

$$5 \quad \left(\frac{3}{16}\right) (8)$$

$$6 \quad \left(\frac{3}{5}\right)^2$$

$$7 \quad 3\frac{7}{8} \cdot \frac{5}{6}$$

$$8 \quad \left(2\frac{1}{2}\right) \left(3\frac{1}{5}\right)$$

$$9 \quad \left(1\frac{1}{2}\right)^3$$

$$10 \quad 5\frac{5}{9} \times 2\frac{16}{25}$$

Divide. Reduce to lowest terms.

$$1 \quad \frac{1}{2} \div \frac{4}{5}$$

$$2 \quad \frac{4}{5} \div \frac{1}{2}$$

$$3 \quad \frac{3}{10} \div \frac{9}{10}$$

$$4 \quad \frac{3}{5} \div 6$$

$$5 \quad 7 \div \frac{1}{7}$$

$$6 \quad 1 \div \frac{1}{8}$$

$$7 \quad 5 \div \frac{2}{3}$$

$$8 \quad 6 \frac{2}{5} \div 20$$

$$9 \quad 2 \frac{3}{4} \div \frac{22}{25}$$

$$10 \quad 3 \frac{4}{5} \div 1 \frac{2}{15}$$

Find the equivalent fraction. Reduce to lowest terms.

1 0.3

2 0.8

3 0.5

4 3.2

5 0.41

6 18.25

7 0.108

8 1.001

9 4.0012

10 89.3205

Add or subtract as indicated.

1 $1.1 + 2.8$

2 $3.5 + 6.14$

3 $9.242 + 0.87$

4 $1.306 + 5.5 + 46.77$

5 $2.01 + 8 + 0.593$

6 $0.9 - 0.2$

7 $12.66 - 3.41$

8 $35.87 - 10.2$

9 $40.4 - 6.37$

10 $28 - 15.59$

Multiply.

$$\begin{array}{r} 1 \quad 0.7 \\ \times 0.4 \\ \hline \end{array}$$

$$\begin{array}{r} 2 \quad 0.12 \\ \times 0.6 \\ \hline \end{array}$$

$$\begin{array}{r} 3 \quad 31.002 \\ \times 9 \\ \hline \end{array}$$

$$\begin{array}{r} 4 \quad 0.63 \\ \times 100 \\ \hline \end{array}$$

$$\begin{array}{r} 5 \quad 0.0085 \\ \times 0.044 \\ \hline \end{array}$$

$$6 \quad 702 \cdot 3.19$$

$$7 \quad (1.504)(1000)$$

$$8 \quad (0.5)^2$$

$$9 \quad 3.4 \times 10$$

$$10 \quad 6.22701 \cdot 0.018$$

Divide. Round your answer to the hundredths place.

$$1 \quad 9 \overline{)211.5}$$

$$2 \quad 0.2 \overline{).31}$$

$$3 \quad 4.6 \overline{)58}$$

$$4 \quad 1.632 \div 0.08$$

$$5 \quad 8.709 \div 100$$

Write as an equivalent decimal. Round to the thousandths place.

$$6 \quad \frac{7}{8}$$

$$7 \quad \frac{5}{21}$$

$$8 \quad \frac{9}{10}$$

$$9 \quad \frac{43}{57}$$

$$10 \quad \frac{81}{20}$$

Write each ratio as a fraction in lowest terms.

1 30 feet to 60 feet

2 45 mph to 25 mph

3 6 minutes to 16 minutes

4 \$300 to \$450

Write each rate as a fraction in lowest terms.

5 48 gallons in 14 mins

6 21 females to 51 males

7 \$4.20 for 36 potatoes

8 72 correct answers out of 96 questions

Find the unit rate.

9 1500 meters in 6 seconds

10 192 miles per 6 gallons.

11 5 cars for 20 people

12 \$36 for 4 lbs of shrimp

Write each proportion.

1 48 is to 32 as 3 is to 2.

2 6 adults is to 10 children as 18 adults is to 30 children.

3 If 12 pens cost \$4, then 33 pens will cost \$11.

Determine if each proportion is true or false:

4 $\frac{2}{3} = \frac{7}{16}$

5 $\frac{48 \text{ acres}}{144 \text{ bags seed}} = \frac{5 \text{ acres}}{15 \text{ bags seed}}$

6 $\frac{12}{28} = \frac{18}{42}$

Solve each proportion to find the value of "x".

7 $\frac{3}{6} = \frac{x}{8}$

8 $\frac{52}{x} = \frac{4}{1}$

9 $\frac{15}{12} = \frac{10}{x}$

10 $\frac{18}{x} = \frac{2.4}{28}$

11 $\frac{3}{4} = \frac{x}{3.8}$

12 $\frac{x}{12} = \frac{2\frac{1}{3}}{5}$

Write each percent as a fraction or mixed number. Simplify.

1 21%

2 5%

3 14%

4 130%

5 $12\frac{1}{2}\%$

Write each percent as a decimal.

6 47%

7 26.3%

8 219%

9 .02%

10 $3\frac{1}{2}\%$

Write each decimal as a percent.

11 0.33

12 0.04

13 2.51

14 6.8

15 3

Write each fraction as a percent.

16 $\frac{3}{4}$

17 $\frac{2}{5}$

18 $\frac{1}{10}$

19 $\frac{1}{8}$

20 $2\frac{3}{5}$

Solve.

- 1 What is 35% of 200?
- 2 15% of what amount is 6?
- 3 30 is what percent of 20?
- 4 Find 102% of 2000.
- 5 What percent of 80 is 60?
- 6 14 is 70% of what number?
- 7 What is 0.5% of 3.2?
- 8 2.5 is what percent of 4?
- 9 5 is what percent of 15?
- 10 12.5% of 32 is what number?
- 11 What percent of 8.7 is 17.4?
- 12 What is 3.1% of 60?

Convert.

1 26 ft = _____ in

2 14 pt = _____ qt

3 9 yd = _____ ft

4 12 oz = _____ lb

5 3.5 gal = _____ qt

6 2.43 tons = _____ lb

7 250 min = _____ hr

8 5.5 mi = _____ yd

9 4 days = _____ hours

10 6600 ft = _____ mi

Convert.

1 2 L = _____ mL

2 24 kL = _____ L

3 420 g = _____ kg

4 1.5 g = _____ mg

5 80 m = _____ km

6 3500 mm = _____ m

7 400 cm = _____ mm

8 3.8 m = _____ cm

9 10,000 mL = _____ L

10 0.002 kg = _____ mg

Refer to the circle graph in the tutorial to answer the following questions.

- 1 What percent of caloric intake should be from fat?
 - 2 What is the ratio of protein to carbohydrates? Write in lowest terms.
 - 3 How many grams of carbohydrates should one have for every 6 grams of protein?
-

Refer to the line graphs in the tutorial to answer the following questions.

- 4 In the year of highest overall video sales, approximately how many videos were sold?
 - 5 DVD sales exceeded VHS sales for the first time in what year?
 - 6 Write the ratio between VHS sales and DVD sales in 1997.
-

Refer to the bar graphs in the tutorial to answer the following questions.

- 7 Which month had the greatest number of guests at the Dove Hotel?
 - 8 In which months did the majority of guests choose the mealplan?
 - 9 Approximately how many guests chose the mealplan in June?
-

Refer to the histogram in the tutorial to answer the following questions.

- 10 Which age range (class interval) has the highest class frequency?
- 11 Which class interval has the lowest class frequency?
- 12 How many members of the club are between 1 and 20 years old?

Find the mean.

1 2, 6, 15, 3, 1, 8, 7

2 34, 57, 68, 12, 9

3 216, 103

Find the median.

4 2, 3, 8, 17, 21

5 102, 138, 194, 320, 322, 387, 569

6 15, 26, 1701

Find the mode.

7 2, 3, 3, 3, 3, 5, 7, 7, 9, 16, 16

8 16, 37, 82, 82, 95, 95, 95, 101, 123

9 2.1, 3.2, 3.2, 3.6, 3.9, 4.3

Fill in the operator ($<$, $>$ or $=$) that makes the statement true.

1 $19 \underline{\quad} 5$

2 $-3 \underline{\quad} 3$

3 $0 \underline{\quad} -12$

4 $-7 \underline{\quad} -7$

5 $-22 \underline{\quad} -48$

Find the number equivalent to the following absolute values.

6 $|6|$

7 $|-5|$

8 $|0|$

9 $-|2|$

10 $-|-8|$

Find the opposite of each number.

11 9

12 -34

13 0

14 -5.1

15 $\frac{3}{7}$

Write TRUE or FALSE for each statement.

16 $|-8| > 0$

17 $|-2| = 2$

18 $|-6| < |-5|$

19 $3 < -(-4)$

20 $-|-9| > -|-15|$

Find the sum or difference as indicated.

1 $8 + (-2)$

2 $-7 + 10$

3 $5 + (-9)$

4 $-6 + (-3)$

5 $12 + (-12)$

6 $(-34) + 17 + (-88) + 5$

7 $-0.4 + 1$

8 $3 - 19$

9 $7 - (-4)$

10 $-5 - 5$

11 $-23 - 6$

12 $-2 + (-4) - 9 + 8$

13 $1 - (-1) + 6 + (-6) - 2$

14 $6.5 + (-8.3) - (-1.6) + 0.7 - 9.9$

Find the product.

$$1 \quad (3)(-6)$$

$$2 \quad (-2)(-7)$$

$$3 \quad -1 \cdot 15$$

$$4 \quad 4(-8)$$

$$5 \quad (-2)^2$$

$$6 \quad (5)(-3)(-9)(1)$$

$$7 \quad (-1)^3$$

$$8 \quad -86 \cdot (4) \cdot 0$$

$$9 \quad \left(-\frac{5}{6}\right)\left(-\frac{2}{3}\right)$$

$$10 \quad \left(-\frac{2}{7}\right)^3$$

$$11 \quad \left(-\frac{1}{2}\right)^2 \cdot (-3)$$

$$12 \quad 2\frac{1}{2} \cdot \left(-\frac{1}{5}\right)$$

Find the quotient. Simplify.

$$13 \quad -16 \div (-8)$$

$$14 \quad -9 \div 9$$

$$15 \quad -100 \div 10$$

$$16 \quad 20 \div (-4)$$

$$17 \quad -52 \div (-1)$$

$$18 \quad -1.5 \div 5$$

$$19 \quad \frac{-1}{-2}$$

$$20 \quad \frac{3}{-4}$$

$$21 \quad \frac{-3}{4}$$

$$22 \quad \frac{-6 - (-1)}{5}$$

$$23 \quad 7 \div \left(-\frac{1}{3}\right)$$

$$24 \quad \frac{2(-0.3)^2}{-6}$$

Evaluate each expression.

1 Let $n = 3$ $12 + n$

2 Let $S = 16$ $3S$

3 Let $x = -7$ $-x + x$

4 Let $p = -2$ p^3

5 Let $m = 500$ $\frac{m}{100}$

6 Let $q = 47$ $q \div 0$

Evaluate. Let $x = -2$ and $y = -3$

7 $x - y$

11 $2x^2y$

8 xy

12 $-xy$

9 $x^4 + y^3$

13 $(2xy)^2$

10 $\frac{x + y}{y - x}$

14 $\frac{4}{x + y - 1}$

Identify the property as commutative, associative or distributive.

1 $a + b = b + a$
 $ab = ba$

2 $a + (b + c) = (a + b) + c$
 $a(bc) = (ab)c$

3 $a(b + c) = ab + ac$
 $a(b - c) = ab - ac$
 $\frac{a + b}{c} = \frac{a}{c} + \frac{b}{c}$

Rewrite using the commutative property.

4 $x + y$

5 $t + 10$

6 pq

Rewrite using the associative property.

7 $(x + y) + z$

8 $x(yz)$

9 $7(ab)$

Rewrite using the distributive property.

$$10 \quad e(g + h)$$

$$11 \quad f(j - s)$$

$$12 \quad 5(a + b)$$

$$13 \quad 3(x + 6)$$

$$14 \quad 2(5x - 1)$$

$$15 \quad a(x + y + 4)$$

$$16 \quad \frac{e + f}{g}$$

$$17 \quad \frac{x + 8}{8}$$

Rewrite by factoring.

$$18 \quad ab + ac$$

$$19 \quad 2b + 2c$$

$$20 \quad 7x + 4x$$

$$21 \quad 15s - 11s$$

$$22 \quad ax + bx + cx$$

Collect like terms to find an equivalent expression.

1 $3x + 6x$

2 $8x + 4y - 5x - 7y$

3 $10x - x$

4 $-9x + x$

5 $13 + 5t + 6y - t - y - 2$

6 $a - 4a$

7 $8x - 5x + 3 + 2y - y - 1$

Remove parentheses to find an equivalent expression.

8 $-(3 + x)$

9 $-(5x + 7)$

10 $-(-2x - 6y + 4)$

11 $-(10x - 17)$

12 $-2(4x + 8)$

Remove parentheses and collect like terms to find an equivalent expression.

13 $6y - (5x - 2y + 8)$

14 $3a + 2a - (5a + 6)$

15 $5y - 2 - (2y - 4)$

16 $20a - 3(6a - 2)$

17 $[3(x + 2) + 2x] - [4(y + 2) - 3(y - 2)]$

Solve using the addition principle.

$$1 \quad x + 3 = -12$$

$$2 \quad m - 5 = -2$$

$$3 \quad -8 + y = 19$$

$$4 \quad z + 3.2 = 5.7$$

$$5 \quad e + \frac{1}{2} = 9$$

$$6 \quad 5 = q - 1\frac{1}{4}$$

$$7 \quad t - 14 = 0$$

$$8 \quad n + 7 = 3$$

$$9 \quad 40 = -2 + x$$

$$10 \quad 5 = b + 2\frac{1}{3}$$

Solve using the multiplication principle.

1 $5x = 40$

2 $12y = 36$

3 $-7y = 14$

4 $3s = -57$

5 $\frac{1}{2}v = 45$

6 $\frac{x}{4} = 3$

7 $\frac{n}{2} = 11$

8 $1.7w = 6.8$

9 $3 = 7x$

10 $\frac{a}{10} = 15$

Solve for x .

$$1 \quad 9x - 5 = 13$$

$$2 \quad 3x + 12 = 24$$

$$3 \quad 8x - 2 = 4 + 5x$$

$$4 \quad 2(3x + 4) = x + 6$$

$$5 \quad \frac{5x}{7} = 8$$

$$6 \quad 6 - 2(x + 3) = 1 + 4x$$

$$7 \quad -8x - 10 = -3$$

$$8 \quad 7x + 3x - (10x + 2) = 5 + x$$

$$9 \quad \frac{x}{2} + 6 = 16$$

$$10 \quad 8 + 2(x - 7) = 0$$

Evaluate the following formulas. Use the given values to find the values of the remaining variables.

1 $P = 4s$ $P = 64$ *Find s.*

2 $A = \frac{x+y+z}{3}$ $x = 5$ *Find A.*
 $y = 3$
 $z = 4$

3 $A = \frac{x+y+z}{3}$ $A = 6$ *Find z.*
 $x = 9$
 $y = 2$

4 $F = \frac{9C}{5} + 32$ $C = -20$ *Find F.*

5 $P = 2L + 2W$ $L = 8$ *Find P.*
 $W = 7$

6 $P = 2L + 2W$ $P = 56$ *Find W.*
 $L = 12$

7 $d = rt$ *Find t.*

8 $P = a + b + c$ *Find b.*

- 1 Jennifer has \$26 less than triple the savings of Matthew. Matthew has saved \$81. How much has Jennifer saved?

- 2 Mark has consumed $\frac{1}{5}$ of a box of cookies, and Patricia has gobbled up another $\frac{2}{3}$. If the box originally had 60 cookies, how many are now left?

- 3 Harold has typed 14 more pages than Rebecca. Together they have typed a total of 138 pages. How many pages have each of them typed?

- 4 The sum of 3 consecutive whole numbers is 72. What are the 3 numbers?

- 5 Jerome ate $\frac{4}{11}$ of the pizza. How much did that leave for Zachary?

Identify each of the following angles as right, straight, acute or obtuse.

1 12°

2 180°

3 97°

4 90°

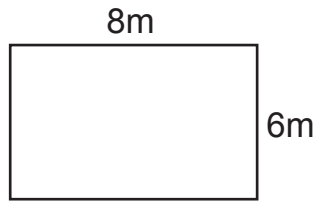
5 163°

6 89°

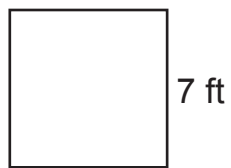
7 $\angle A$ and $\angle B$ are congruent. If $\angle A$ is 50° , what is the measurement of $\angle B$?

8 $\angle E$ and $\angle F$ are complimentary. If $\angle E$ is 35° , what is the measurement of $\angle F$?

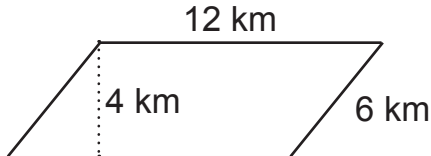
9 $\angle S$ and $\angle T$ are supplementary. If $\angle S$ is 98° , what is the measurement of $\angle T$?



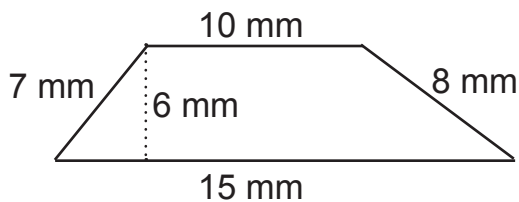
- 1 Find the perimeter of the rectangle.
 - 2 Find the area of the rectangle.
-



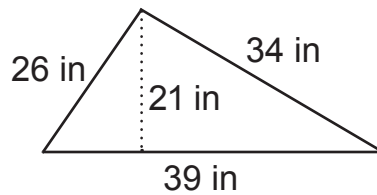
- 3 Find the perimeter of the square.
 - 4 Find the area of the square.
-



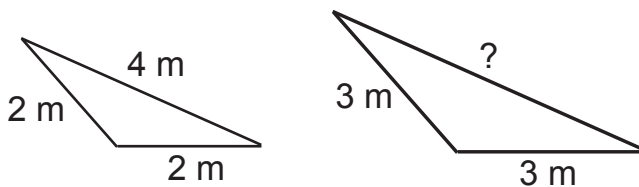
- 5 Find the perimeter of the parallelogram.
 - 6 Find the area of the parallelogram.
-



- 7 Find the perimeter of the trapezoid.
 - 8 Find the area of the trapezoid.
-
- 9 What is the sum of the angles of a quadrilateral?



- 1 Find the perimeter of the triangle.
 - 2 Find the area of the triangle.
-

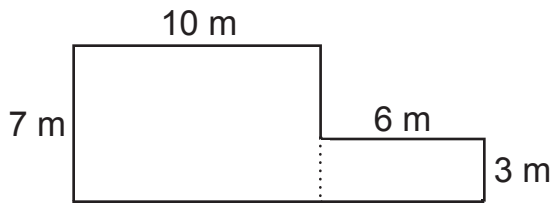


- 3 Find the missing side to the similar triangles.
-
- 4 What is the sum of the angles of a triangle?
-

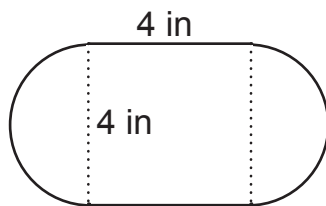
Identify the type of each triangle according to its description.

- 5 2 equal sides, 2 equal angles
- 6 3 acute angles
- 7 1 right angle
- 8 3 equal sides, 3 equal angles
- 9 no equal sides, no equal angles
- 10 1 obtuse angle

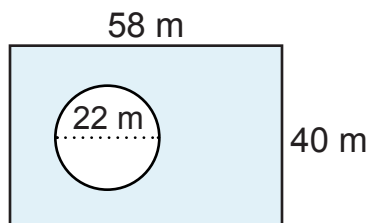
- 1 A circle has a diameter of 48 km. What is the radius?
- 2 Find the diameter of a circle whose radius is 10 miles.
- 3 What is the value of π , rounded to the hundredths place?
- 4 Find the circumference of a circle whose diameter is 19 m.
- 5 Find the circumference of a circle whose radius is 2.5 ft.
- 6 Find the area of a circle whose radius is 7 mm.
- 7 Find the area of a circle whose diameter is 18 yd.
- 8 Find the area of a semicircle whose radius is 5 cm.



- 1 Find the perimeter of the above figure.
 - 2 Find the area of the above figure.
-



- 3 Find the perimeter of the above figure.
 - 4 Find the area of the above figure.
-



- 5 Find the shaded area of the above figure.

Find the volume of the following figures.

- 1 A rectangular solid that is 6 mm long, 4 mm wide and 8 mm high.

- 2 A pyramid whose length = 12 ft, width = 7 ft, and height = 10 ft.

- 3 A cone whose radius = 4m, and height = 18 m.

- 4 A sphere with a radius of 6 km.

- 5 A hemisphere with a radius of 3 in.

- 6 A cylinder whose radius = 9 yd and height = 2 yd.

ANSWERS

1 Adding Whole Numbers

- 1) 79 2) 14 3) 169 4) 82 5) 1104 6) 4481 7) 8918
8) 6326 9) 9455 10) 70,860 11) 1,217,715 12) 102,590,949

2 Subtracting Whole Numbers

- 1) 42 2) 64 3) 6 4) 67 5) 27 6) 401 7) 314
8) 456 9) 278 10) 1279 11) 8039 12) 539,529

3 Multiplying Whole Numbers

- 1) 288 2) 234 3) 4617 4) 3312 5) 6970 6) 6768 7) 24,000
8) 33,031 9) 76,048 10) 641,902 11) 1,460,000 12) 46,677,072

4 Dividing Whole Numbers

- 1) 52 2) 84 3) 6.5 4) 25.6 5) 322.25 6) 247.78 7) 45
8) 7 9) 27.5 10) 20.07 11) 19.52 12) 395.09

5 Order of Operations, Exponents

- 1) 8^5 2) 267^2 3) 1^5 4) 85^1 5) 32 6) 1000 7) 16
8) 1 9) 1 10) 203 11) 486 12) 28 13) -48

6 Mixed Numbers

- 1) a, d 2) $\frac{14}{5}$ 3) $\frac{113}{17}$ 4) $\frac{548}{45}$ 5) $\frac{552}{61}$ 6) $\frac{6044}{69}$ 7) $2\frac{2}{3}$
8) $1\frac{3}{7}$ 9) $3\frac{5}{17}$ 10) 12 11) $1\frac{1}{93}$

7 Prime Factorization

- 1) 1,2,3,6 2) 1,7 3) 1,3,5,9,15,45 4) 1,2,4,5,10,20 5) c,e,f 6) $2^2 \cdot 3$
7) $2^2 \cdot 3 \cdot 5$ 8) $2 \cdot 3^2$ 9) $3 \cdot 11$ 10) $3 \cdot 5 \cdot 7$ 11) 5^3 12) $2 \cdot 3 \cdot 7$

8 Least Common Multiple

- 1) 10 2) 12 3) 40 4) 24 5) 90 6) 30 7) 24
8) 60 9) 60 10) 360 11) 216 12) 72

ANSWERS

9 Simplifying Fractions

- 1) $\frac{1}{6}$ 2) $\frac{3}{5}$ 3) $\frac{3}{4}$ 4) 1 5) $\frac{2}{3}$ 6) $\frac{5}{6}$ 7) $\frac{1}{10}$
8) $\frac{1}{20}$ 9) $\frac{7}{341}$ 10) $2\frac{1}{5}$ 11) 3 12) 5

10 Adding & Subtracting Fractions

- 1) $\frac{15}{17}$ 2) 1 3) $1\frac{7}{10}$ 4) $1\frac{1}{6}$ 5) $\frac{7}{8}$ 6) $1\frac{1}{12}$ 7) $\frac{3}{11}$
8) $\frac{1}{8}$ 9) $\frac{1}{9}$ 10) $\frac{1}{2}$ 11) $\frac{16}{25}$ 12) $\frac{3}{10}$

11 Adding & Subtracting Mixed Numbers

- 1) $3\frac{2}{3}$ 2) $5\frac{1}{2}$ 3) $26\frac{16}{17}$ 4) $21\frac{39}{100}$ 5) $3\frac{1}{2}$ 6) $11\frac{3}{8}$ 7) $2\frac{1}{3}$
8) $3\frac{1}{2}$ 9) $6\frac{1}{3}$ 10) $3\frac{13}{24}$ 11) $\frac{4}{5}$ 12) $\frac{3}{4}$

12 Multiplying Fractions

- 1) $\frac{3}{8}$ 2) $\frac{1}{6}$ 3) 9 4) 4 5) $1\frac{1}{2}$ 6) $\frac{9}{25}$ 7) $3\frac{11}{48}$
8) 8 9) $3\frac{3}{8}$ 10) $14\frac{2}{3}$

13 Dividing Fractions

- 1) $\frac{5}{8}$ 2) $1\frac{3}{5}$ 3) $\frac{1}{3}$ 4) $\frac{1}{10}$ 5) 49 6) 8 7) $7\frac{1}{2}$
8) $\frac{8}{25}$ 9) $3\frac{1}{8}$ 10) $3\frac{6}{17}$

14 Decimals to Fractions

- 1) $\frac{3}{10}$ 2) $\frac{4}{5}$ 3) $\frac{1}{2}$ 4) $3\frac{1}{5}$ 5) $\frac{41}{100}$ 6) $18\frac{1}{4}$ 7) $\frac{27}{250}$
8) $1\frac{1}{1000}$ 9) $4\frac{3}{2500}$ 10) $89\frac{641}{2000}$

15 Adding & Subtracting Decimals

- 1) 3.9 2) 9.64 3) 10.112 4) 53.576 5) 10.603 6) 0.7 7) 9.25
8) 25.67 9) 34.03 10) 12.41

16 Multiplying Decimals

- 1) 0.28 2) .072 3) 279.018 4) 63 5) .000374 6) 2239.38
7) 1504 8) 0.25 9) 34 10) .11208618

ANSWERS

17 *Dividing Decimals*

- 1) 23.5 2) 1.55 3) 12.61 4) 20.4 5) 0.09 6) 0.875 7) 0.238
8) 0.9 9) 0.754 10) 4.05

18 *Ratios & Rates*

- 1) $\frac{1}{2}$ 2) $\frac{9}{5}$ 3) $\frac{3}{8}$ 4) $\frac{2}{3}$ 5) $\frac{24 \text{ gallons}}{7 \text{ minutes}}$ 6) $\frac{7 \text{ females}}{17 \text{ males}}$
7) $\frac{\$.35}{3 \text{ potatoes}}$ 8) $\frac{3 \text{ correct}}{4 \text{ questions}}$ 9) 250 meters/second 10) 32 miles/gallon
11) 4 people/car 12) \$9/lb shrimp

19 *Proportions*

- 1) $\frac{48}{32} = \frac{3}{2}$ 2) $\frac{6 \text{ adults}}{10 \text{ children}} = \frac{18 \text{ adults}}{30 \text{ children}}$ 3) $\frac{12 \text{ pens}}{\$4} = \frac{33 \text{ pens}}{\$11}$ 4) false
5) true 6) true 7) 4 8) 13 9) 8 10) 210 11) 2.85
12) $5\frac{3}{5}$

20 *Converting Percents*

- 1) $\frac{21}{100}$ 2) $\frac{1}{20}$ 3) $\frac{7}{50}$ 4) $1\frac{3}{10}$ 5) $\frac{1}{8}$ 6) 0.47 7) 0.263
8) 2.19 9) .0002 10) 0.035 11) 33% 12) 4% 13) 251% 14) 680%
15) 300% 16) 75% 17) 40% 18) 10% 19) 12.5% 20) 260%

21 *Percents Problems*

- 1) 70 2) 40 3) 150% 4) 2040 5) 75% 6) 20 7) 0.016
8) 62.5% 9) $33\frac{1}{3}\%$ 10) 4 11) 200% 12) 1.86

22 *Measurements - American Units*

- 1) 312 2) 7 3) 27 4) $\frac{3}{4}$ 5) 14 6) 4860 7) $4\frac{1}{6}$
8) 9680 9) 96 10) $1\frac{1}{4}$

23 *Measurements - Metric Units*

- 1) 2000 2) 24,000 3) 0.42 4) 1500 5) 0.08 6) 3.5 7) 4000
8) 380 9) 10 10) 2000

ANSWERS

24 *Graphs*

- 1) 30% 2) $\frac{3}{11}$ 3) 22 4) 7800 5) 2001 6) $\frac{7 \text{ VHS}}{2 \text{ DVD}}$ 7) JUL
8) JUL, AUG & SEP 9) 2500 10) 41 - 60 11) 81 - 99 12) 12

25 *Mean, Median & Mode*

- 1) 6 2) 36 3) 159.50 4) 8 5) 320 6) 26 7) 3
8) 95 9) 3.2

26 *Real Numbers: The Basics*

- 1) > 2) < 3) > 4) = 5) > 6) 6 7) 5
8) 0 9) - 2 10) - 8 11) - 9 12) 34 13) 0 14) 5.1
15) - $\frac{3}{7}$ 16) True 17) True 18) False 19) True 20) True

27 *Adding & Subtracting Real Numbers*

- 1) 6 2) 3 3) - 4 4) - 9 5) 0 6) - 100 7) 0.6
8) - 16 9) 11 10) - 10 11) - 29 12) - 7 13) 0 14) - 9.4

28 *Multiplying & Dividing Real Numbers*

- 1) - 18 2) 14 3) - 15 4) - 32 5) 4 6) 135 7) - 1
8) 0 9) $\frac{5}{9}$ 10) - $\frac{8}{343}$ 11) - $\frac{3}{4}$ 12) - $\frac{1}{2}$ 13) 2 14) - 1
15) - 10 16) - 5 17) 52 18) - 0.3 19) $\frac{1}{2}$ 20) - $\frac{3}{4}$ 21) - $\frac{3}{4}$
22) - 1 23) - 21 24) - 0.03

29 *Evaluating Expressions*

- 1) 15 2) 48 3) 0 4) - 8 5) 5 6) undefined 7) 1
8) 6 9) - 11 10) 5 11) - 24 12) - 6 13) 144 14) - $\frac{2}{3}$

30 *Properties*

- 1) commutative 2) associative 3) distributive 4) $y + x$ 5) $10 + t$ 6) qp
7) $x + (y + z)$ 8) $(xy)z$ 9) $(7a)b$ 10) $eg + eh$ 11) $fj - fs$ 12) $5a + 5b$

ANSWERS

30 Properties (continued)

- 13) $3x + 18$ 14) $10x - 2$ 15) $ax + ay + 4a$ 16) $\frac{e}{g} + \frac{f}{g}$ 17) $\frac{x}{8} + 1$
18) $a(b + c)$ 19) $2(b + c)$ 20) $x(7 + 4) = 11x$ 21) $s(15 - 11) = 4s$ 22) $x(a + b + c)$

31 Simplifying

- 1) $9x$ 2) $3x - 3y$ 3) $9x$ 4) $-8x$ 5) $11 + 4t + 5y$ 6) $-3a$
7) $3x + y + 2$ 8) $-3 - x$ 9) $-5x - 7$ 10) $2x + 6y - 4$ 11) $-10x + 17$
12) $-8x - 16$ 13) $8y - 5x - 8$ 14) -6 15) $3y + 2$ 16) $2a + 6$ 17) $5x - y - 8$

32 Equations: Addition Principle

- 1) -15 2) 3 3) 27 4) 2.5 5) $8\frac{1}{2}$ 6) $6\frac{1}{4}$ 7) 14
8) -4 9) 42 10) $2\frac{2}{3}$

33 Equations: Multiplication Principle

- 1) 8 2) 3 3) -2 4) -19 5) 90 6) 12 7) 22
8) 4 9) $\frac{3}{7}$ 10) 150

34 Multistep Equations

- 1) 2 2) 4 3) 2 4) $-\frac{2}{5}$ 5) $\frac{56}{5}$ or $11\frac{1}{5}$ 6) $-\frac{1}{6}$
7) $-\frac{7}{8}$ 8) -7 9) 20 10) 3

35 Formulas

- 1) 16 2) 4 3) 7 4) -4 5) 30 6) 16 7) $\frac{d}{r}$
8) $P - a - c$

36 Word Problems

- 1) $\$217$ 2) 8 3) Harold: 62 , Rebecca: 76 4) $23, 24, 25$ 5) $\frac{7}{11}$

37 Geometry: Lines & Angles

- 1) acute 2) straight 3) obtuse 4) right 5) obtuse 6) acute 7) 50°
8) 55° 9) 82°

ANSWERS

38 *Quadrilaterals*

- 1) 28 m 2) 48 m^2 3) 28 ft 4) 49 ft^2 5) 36 km 6) 48 km^2 7) 40 mm
8) 75 mm^2 9) 360°

39 *Triangles*

- 1) 99 in 2) 409.5 in^2 3) 6m 4) 180° 5) Isosceles 6) Acute
7) Right 8) Equilateral 9) Scalene 10) Obtuse

40 *Circles*

- 1) 24km 2) 20 miles 3) 3.14 4) 59.66 m 5) 15.7 ft 6) 153.86 mm^2
7) 254.34 yd^2 8) 39.25 cm^2

41 *Composite Figures*

- 1) 46 m 2) 88 m^2 3) 20.56 in 4) 28.56 in^2 5) 1940.06 m^2

42 *Volume*

- 1) 192 mm^3 2) 280 ft^3 3) 301.44 m^3 4) 904.32 km^3 5) 56.52 in^3
6) 508.68 yd^3

