A car travels 24 miles in 45 minutes. What is its average speed?
18 mph.
32 mph.
36 mph.

(6 - 2) - (6 - 9) / (-3 + (-3))
3 ½.
4.
4 ½.

15.4/2 - 2*(6.2 - 15.6)
-11.1.
11.1.
26.5.

A cuboid has dimensions of 4 cm, 6 cm and 12 cm. What is its volume?
0.028 m3 0.000288 m3
2.88 m3

What is a scalene triange?
2 sides unequal. All 3 sides unequal. 2 sides equal.

Work out the following sum: 4 {2 (5-1) -3} + 8
28
37.
54.

A rectangle is 11cm x 120cm. What is its area in m2?
0.132.
13.2.
1320.

The surface area of a cone whose height is 10 cm and diameter is 8 cm is
40π cm2 . 80π cm2. 120π cm2 .

9) 4 3/8 – 2 1/4 + 1/8 =
2 1/8
2 1/4
2.5

10) 11/16 + 5/8 =
55/128
10/11
21/16

3/4 multiplied by 0.82 is equal to
0.615.
1.23.
2.46.

7/6 can be expressed as
1.166.
1.6.
2.6.

The ratio of 6:5 can be expressed as
10:16.
20:25.
24:20.

14^3 can be expressed as
14 * 14 * 14.
14 x3 .
14 + 14 + 14.

0.0000413 can be written as
0.413 x 10^-7.
413 x 10^-7.
4.13 x 10^-7.

16) 5/8 + 3/4 =
11/4.
8/8.
11/8.

The Lowest Common Denominator for the problem below is 1/6 + 1/5 + 1/17 + 1/2.
510.
1020.
17.

The formula for calculating the area of a right angled triangle is
½ height + base.
½ (base * height).
½ base / height.

The area of a circle whose circumference is given as 12cm is approximately
3.8 cm^2.
11.3 cm^2. 38 cm^2.

Curved area of a right circular cone of base radius r, and height l, is
(Ï€ * r * l) + 2Ï€ * r * r. 2/3 (Ï€ * r * l).
Ï€ * r * l.

21) Determine: (+3) - (-4).
-1
-7
+7

22) To convert imperial gallons to litres, multiply by
4.5
4.7
5.4

Express 9/20 as a percentage.
40%
45%
47%

To find the area of a circle, multiply
twice the radius by π.
the square of the circumference by the radius. the square of the radius by π.

How many centimetres is in an inch?
0.254
2.54
25.4

26) Find the lowest common multiple of 6; 7; 8.
84
168
336

What torque loading would you apply to a nut if the force is 50 lbs, exerted 2 feet from its axis?
100 lbs.ft.
251 lbs.ft.
600 lbs.ft.

The formula for calculating the torque loading on a nut or bolt is
force used x lever length of the spanner. lever length of the spanner / threads per inch. force used x diameter of the bolt.

How is the area of a circle calculated? (r=radius, d=diameter).
2 x 3.142 x r
d^2 x 3.142
r^2 x 3.142

30) 9/4 + 5/12 + 5 1/8 =
2 25/24
4 1/12
7 19/24

The specific torque loading for a bolt is 50 lbs.ins but an extension of 2 is needed to reach the bolt in addition to the 8 torque wrench. What will the actual reading?
40 lb.ins.
54 lb.ins.
60 lb.ins.

Express the fraction 7/8 as a decimal.
0.785
0.875
0.878

33) 0.75 x 0.003 =
0.00225
0.0225
0.225

Convert 162 knots to MPH.
176 mph
186 mph
196 mph

To convert inches to millimetres, it is necessary to
divide by 25.4.
multiply by 25.4.
multiply by 2.54.

36) 3/4 * 82 =
81.5
61.5
123

37) A circular patch is held together by seven equally spaced rivets. What is their angular

spacing?
51.43°
51.50°
52°

38) 3/4 + 5/16 + 7/8 + 0.375 =
2 1/8
2 1/4
2 5/16

To convert pounds of fuel into kilograms, it is necessary to
divide by 0.4536.
multiply by 4536.
multiply by 0.4536.

If resin to hardener is used in the ratio of 1000:45, how much hardener is used with 60 grams of resin?
2.7 grams 47 grams 145 grams

41) 11/16 + 5/8 =
11/10
1 5/16
1 55/128

6 mm is equal to
0.236 inches.
0.375 inches. 0.625 inches.

Weight is equal to volume x gravity. mass x acceleration. mass x gravity.

44) 8 + 4[5 x 2 (5-9/3)] =
12
48
88

To convert gallons to litres, multiply by
0.00455.
0.568.
4.55.

A cylinder has a diameter of 20 cm and a length of 20 cm, what is its volume?
400 cm^3
1240 cm^3
6200 cm^3

47) 31/8 – 11/5 =
13/40
23/40
67/40

48) What is the formula for calculating the curved area of a cone?
2/3 * Ï€ * radius * slan height Ï€ * radius * slant height
Ï€ * radius^2 * slant height

49) 10 (23) + 10 (25) =
320
480
520

One radian is equal to
75Â°
57.3Â°
90Â°

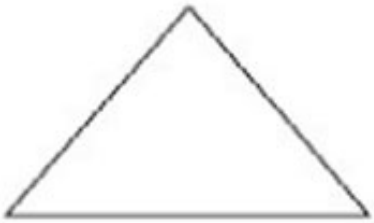
The curved surface area of a cylinder of diameter 10 cm and height 10 cm, is
100Ï€.
80Ï€.
50Ï€.

A parallelogram has a base 120cm and height 11 cm. What is the area?
0.0132 m^2
0.132 m^2
1.32 m^2

The area of this shape is calculated by

perimeter squared.
½ Base * Height. Base * Height.

The area of the shape is calculated by



Â½ base / height.
Â½ base * Â½ height. Â½ height * base.

The area of the curved surface area of a cone is
1/3Ï€r^2 h. Ï€r^2 h.
Ï€rl.

What is the volume of a cuboid?
height * length * width
½ base * height^2 height * ½ base * length

57) (4-6)-(9/-3) + (-3) =
-2
4
4.5

An aircraft travels 2150 nautical miles in 2 hours 30 minutes. What is the average speed of the aircraft?
550 knots
600 knots
860 knots

What is the curved surface area of a cylinder whose diameter is 20cm and height of 15 cm?

350Ï€
300Ï€
942Ï€

Four percent of 0.01 is
0.0004.
0.004.
0.04.

17 degrees 49 minutes and 10 seconds added to 22 degrees 22 minutes and 59 seconds, equals
degrees 11 minutes and 9 seconds.
degrees 11 minutes and 69 seconds.
40 degrees 12 minutes and 9 seconds.

The diameter of a cylinder is 200 cm and the height is 20 cm, what is the volume?
8000 cm^3
62800 cm^3
628000 cm^3

The comparison of the power input to the power output of an inverter is expressed as a
ratio. gain. loss.

The ratio of 6:4 can also be expressed as
64%.
66%.
150%.

200 kilovolts can be expressed as
2 * 10^3 volts. 2 * 10^4 volts. 2 * 10^5 volts.

What is the surface area of a cone if the base is

8cm diameter and the height is 10cm?
40π 80π 120π

What is the area of a rectangle when its height is 11cm and the width 120cm?
0.132 m^2
1.32 m^2 1320 m^2

68) 4 3/8 – 2 ¼ + 1/5 =
2 1/4
2 13/40
3 3/10

69) 4*(4 *(4 – 1) –1) –1 =
15
31
43

Which number is the lowest common factor of 36, 66 and 126?
6
12
23

What is 3% of 0.001?
0.00003
0.003
0.3

11/16 divided by 5/8 is
55/128
10/11
11/10

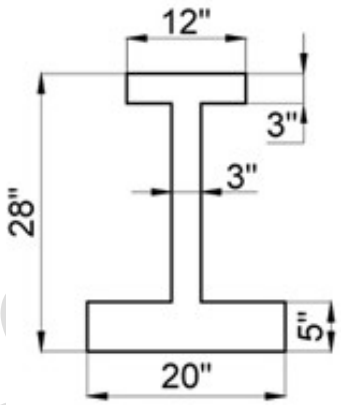
An aircraft uses 1680 gallons of fuel, the left tank uses 45%, the right tank uses 32.5%, how much was used by the centre tank?
21 gallons.
210 gallons.
378 gallons.

What is the fraction 1/7 in decimal?
0.14286
0.14295
1.429

The supplement of 13 degrees is
76.
167.
243.

What is the area of a ring with an outer diameter of 90 inches and an inner diameter of 80 inches?
325π
425π
435π

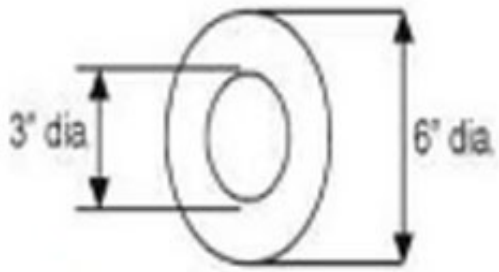
What is the area of the shape shown, in square centimeters?



1264
1130
1000

What is the area of a rectangle with base 160cm and height 12cm?
0.00192 m^2
0.0192 m^2
0.192 m^2

Calculate the area of the shape shown:



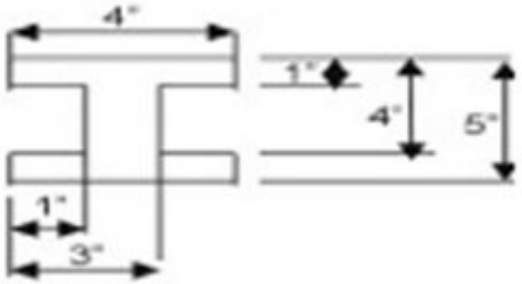
3π 6.75π
17.5π

An aircraft flies 1350nm in 2 hrs 15 minutes. What is the average speed?
600kts 650kts 850kts

What is the supplement of 13 degrees 13 minutes 13 seconds?
degree 46 minutes 47 seconds.
degrees 46 minutes 47 seconds.
266 degrees 87 minutes 87 seconds.

82) 15.4 / 2 - 2 * (6.2 - 15.6) =
4.5
11.1
26.5

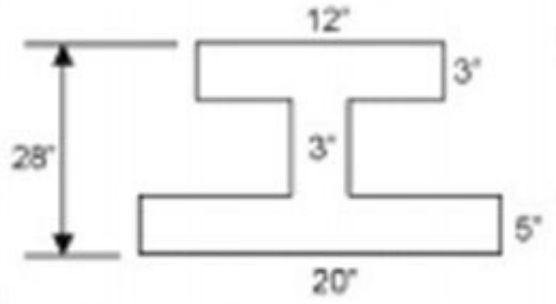
Calculate the area of the shape shown:



12 sq.ins.
14 sq.ins.
16 sq.ins.

A mound of soil is piled up into a cone of base diameter 1.8m and height 0.6 m. What is the volume of soil?
0.5 m^3
m^3
1.5 m^3

What is the area of the shape below?



196 square inches
200 square inches
220 square inches

What is 1 radian in degrees?
57°
66°
270°

87) (5^2 * 5^3)^2 =
5^12
5^10
5^7

88) What is 30% of 0.01?
0.03
0.003
0.0003

89) 15.4 / 2 - 2 (4.6 - 15.7) =
-14.5
26.5
29.9

How many radians are in 360°?
2π 4π 6π

What is the area (including the ends) of a cylinder diameter 10 cm and 10 cm in height?
50π 100π
150π

What is the highest factor of 153?
3
6
9

Convert into decimal the fraction 5/8 of 60.
37
37.5
40

An aeroplane has 1800 gallons of fuel on board. 35% in the left wing 42.5% in the right wing how much fuel is in the centre tank?
183 gallons
405 gallons
545 gallons

In the common fraction 2/5, the number 5 is known as
the quotient. the numerator.
the denominator.

96) If 42% = 15000, what is 100%?

6300
21300
35714

The fraction 17/11 is classed as
a mixed fraction.
an improper fraction. a proper fraction.

To convert 1 inch to centimetres
divide by 2.54.
multiply by 2.54.
divide by 25.4.

0.000006 volts can be written a
60 nanovolts.
6 microvolts.
6 millivolts.

100) The median of the values 20, 28, 17, 34, 40, 11, 34, 26 is
26.25.
27.0.
34.0.

The mode of the following 28, 17, 34, 28, 34, 35, 28, 40 is
28.0.
30.5.
31.0.

0.004 amperes can be written as
0.4mA.
4mA.
4kA.

A sphere with a radius of 2 cm has a surface area of
8π cm^2. 16π cm^2. 64π cm^2.

The sum of an odd and an even number is
sometimes odd, sometimes even. always odd.
always even.

A copper pipe has a radius of 7/32 inch. What is this in decimal?
0.15625
0.21875
0.28125

Millibar is the unit of
temperature. pressure. density.

A ball rolls down a hill initially at 60 ft/s. It slows down at a rate of 5 ft/s2 for 7 seconds. What will its final speed be?
15 ft/s
25 ft/s
35 ft/s

A dial gauge is calibrated to an accuracy of 0.001 inch, when using the dial gauge, you should
round off the answer to calibrated value. read the true value to 4 decimal places. read five significant figures.

In a flight control system, the control cable is allowed an elongation of 3% due to wear. The length from the manufacturer is 78cm, what is its maximum used length?
2.34 cm
78.34 cm
80.34 cm

You have made 20% profit. Your balance is now £900. What was your pre-profit balance?
£700
£750.
£800.

One of the square roots of a positive number is positive. What is the other one?
positive negative
positive or negative.

A cylinder has a radius of 20cm and a length of 40cm. What is its volume? (Take π as 3.1)
800 cm^3
49600 cm^3
50270 cm^3

Can you take the cube root of a negative number?
Yes. No.
Only certain numbers.

The process of removing roots from the denominator of fractions is called what?
Rationalizing the denominator. Squaring the denominator.
Derooting the denominator.

Find the curved surface area of a cylinder diameter 20cm and length 10cm.
400 cm^2
628 cm^2
200 cm^2

The conversion factor of litres to pints is
0.57.
1.76.
2.2.

The volume of a pyramid is_____times b times h.
1/4
1/3
1/2

What is the square root of 0.0289?
0.17
1.017
1.7

A car travelling at 72 km/hour is travelling at what speed?
10 m/s
20 m/s
30 m/s

If you bought a TV set worth £30 after getting 15% discount. How much discount did you get?
£5
£15
£35

If you bought a second hand car worth £4500 after getting 15% discount. How much did the car cost originally?
£3800
£5300
£6000

122) 31 * 91 * 23 * 52 =
3,373
33,739
3,373,916

123) 1/5 + 2.5 - 6 =
2.0
-3.3
3.3

Express 173942 in standard form
17.3942 * 10^4
1.73942 * 10^5
173.942 * 10^3

The sum of an odd number + an odd number is a
either odd or even. odd number.
even number.

Express 750 milligrams in grams
0.0000075
0.075
0.75

There is 1800 pounds of fuel in an aircraft, 25% in the left tank and 45% in the right. How much fuel is in the centre tank?
450 pounds
540 pounds
810 pounds

What is the supplement of an angle of 37°?
8°
53°
143°

To what power must 10 be raised to equal 100,000?
4
5
6

Find the square root of 1600.
40
80
800

131) What is the ratio of 5 feet to 30 inches?
1 : 6

5 : 3
2 : 1

132) 5 [3 + 6 (7 -4) - 2] =
31
95
395

133) 3 [5 - 2 (4 - 7)] =
-3
9
33

What is the cube root of -64?
-8
-4
4

What is the cube root of 8^2.
2
4
8

An engine of 96 horsepower is running at 75% power. What horsepower is being developed?
62
72
168

A blueprint shows a hole of 0.3751 to be drilled. What fraction size drill bit is most nearly equal?
3/16
5/16
3/8

120 out of 125 bolts produced are of an acceptable tolerance. What percentage of the bolts are not acceptable?
4%
5%
25%

139) 1/4 + 3/8 - 1/2 =
1/14
1/8
1/2

140) 3 3/4 + 4 2/3 =
7 5/12
7 5/7
8 5/12

141) An aircraft travels 1400 nautical miles in 1 hour 45 minutes. What is the average speed of the aircraft?
750 knots
800 knots
2450 knots

142) 0.8 * 0.004 =
0.0032
0.032
0.32

Convert 10 inches to millimetres.
25.4 mm 254 mm 2540 mm

What number is the highest common factor of 24, 84, 120?
8
12
24

0.0000314 can be written as
3.14 x 10^-5.
3.14 x 10^-4
3.14 x 10^5

What is the Lowest Common Multiple of 5; 12; 20.
5
60
120

147) 1/4 {(4 - 6) - (2 - 8)} =
-2
3/4
1

What is the average of the following numbers? 5, 13, 23, 12, 17.
14
15
23

What is the volume of a rectangular tank 5m by 4 m by 150cm?
30 m^2
30 m^3
3000 m^3

What is the depth of a rectangular tank whose volume is 40 m^3. and has a base 5m by 10m?
0.08m
80cm 8m

Convert 20 imperial gallons to litres.
9.092 litres
90.92 litres
909.2 litres

To find the area of a circle use the formula -
2πd. πr^2 . 2πr.

What is the circumference of the top of a cylindrical tank whose radius is 3 metres?
3π metres 6π metres 9π metres

What is the surface area of a cylindrical pipe of length 150 cm and diameter 5cm?
750π cm^2 1500π cm^2 3750π cm^2

Find the value of 5/8 of 4/5.
1/2
3/4.
25/32

What is the square root of 4 raised to the fifth power?
32
64
128

157) -3 [8 - 3 (5 + √9) - (7 - 9)] =
-42
42
60

Which of the fractions is equivalent to 0.075?
1/40
3/40
3/4

Express 3/8 as a percentage.
0.375%
3.75%
37.5%

An aeroplane flies 1000 miles and uses 80 gallons of fuel. How much fuel will it use on a 2500 mile flight?
200 gallons
240 gallons
250 gallons

A pinion gear with 16 teeth is driving a spur gear with 48 teeth at 120 RPM. Find the speed of the pinion gear.
40 RPM
144 RPM
360 RPM

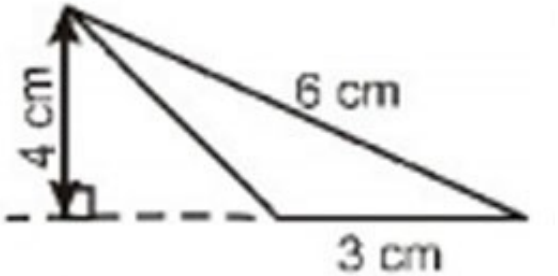
What is the piston displacement of a master cylinder with a 4cm diameter bore and a piston stroke of 10 cm?
8π cm^3 40π cm^3 160π cm^3

The curved surface area of a right cone is
11/3 πRL. πRL.
πR2 H.

How many millimetres in an inch?
2.54
25.4
2540

Find the the area of a circular ring Whose outer diameter is 10 cm and inner diameter is 6 diameter?
4π cm^2 16π cm^2 64π cm^2

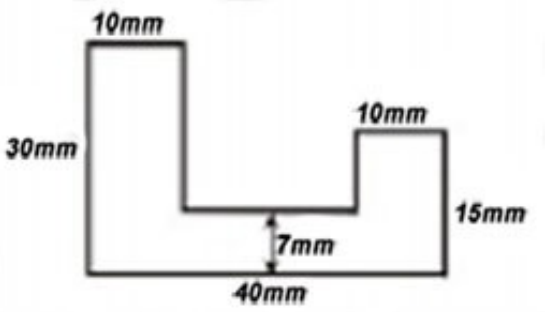
Find the area of the triangle shown below:



6 cm^2
9 cm^2

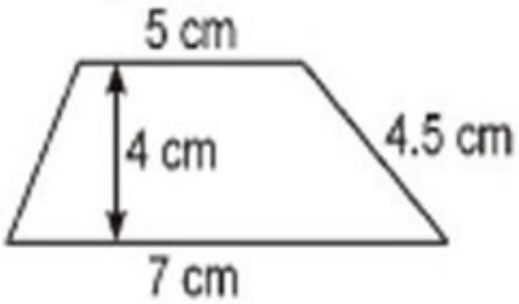
12 cm^2

What is the area of the shape shown, in square cm?



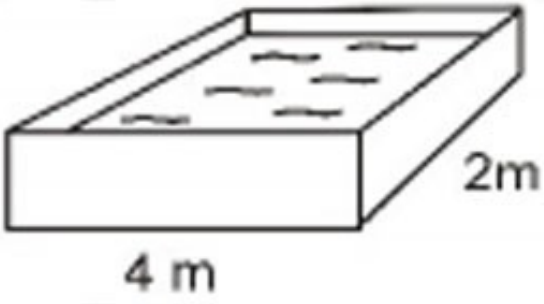
5.9
590
5900

What is the area of the trapezium shown?



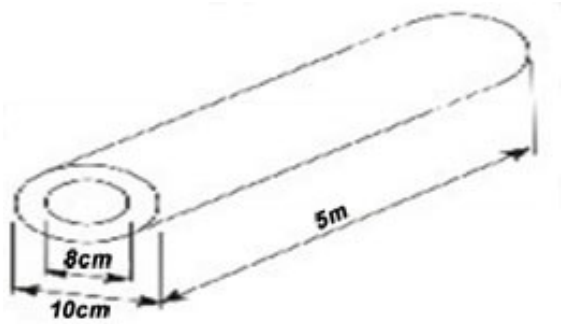
24 cm^2
27 cm^2
Area cannot be calculated from information given.

What is the depth of water in the tank shown if the volume of water is 4000 litres?



50 cm
80 cm
5 m

What is the volume of metal used in the pipe shown?



4500Ï€ cm^3
45Ï€ cm^3
18000Ï€ cm^3

24/0 (twenty four divided by nothing) is
infinity. nothing. 24.

172) If 20% of 120 is 24, what is 24% of 20?
4.8
28
18

173) A shop keeper sold his car for £120. If this is 80% of the buying price, how much loss did he make?
£30
£50
£150

174) 3 + 4 - 5(4 - 2) =
-3
4
13

Solve the following equation: 5x = 3x + 2.
x = 3
x = 1
x = 5

Simplify the following (w + z)(x - y)(y - w) / (y - x)(w - y)(w + z).
-1
0
+1

Given 43-x = 21, find the value of x.
x=43-21 x=43/21 x=43+21

Make L the subject of the formula 2pfL = x.

L = 2pf.
L = 2pf / x. L = x / 2pf.

Given that A = X+BY, what is Y equal to?
A-X add B
A-X divided by B A-X minus B

If y/x = 4 and y = 5 then x =
4/5.
1 ¼.
20.

181) (x - 3)(x + 5) =
x^2 + 2x - 15 x^2 + 2x
x^2 -15

182) 21 = 43 - x x=21-43 x=43+21
x=43-21

183) Evaluate 2x^2 * z^2 * (3x - z^2) =
6x^3 * z^2 - 2x^2 * z^4
6x^2 * z^2 - 2x^2 * z^2
6x^2 * z^2 + 3x - z^2

184) (a * b)(a * b) =
a^2 * b^2
a^2 + 2ab + b^2 a^2 + b^2

If y/x = 4 and x = 5 then y =
1 ¼.
4/5.
20.

Determine x.

$$X = \sqrt{81} + \left(\frac{(-9) - 4}{8^2 + 12}\right)^2$$

x=8.971 x=9.029 x=9.570

Find L in the following expression:

$$Q = \frac{1}{R}\sqrt{\frac{L}{C}}$$

L = Q^2 * C^2 / R L = Q^2 * C / R^2 L = Q^2 * R^2 * C

Factorise the following : x^2 - x - 6 = 0.
(x - 2)(x + 3)
(x - 2)(x - 3)
(x + 2)(x - 3)

Factorise the following: 4x^2 - 6x - 28 = 0.
(2x^2 + 7) * (x + 2) (4x - 14) * (x + 2)
(2x + 7) * (x - 2)

Solve for x in the equation: 3(x + 2) = 30 + 2(x-4).
x=8 x=15 x=16

191) 2x = 4(x - 3)
x = 0.5
x = 2
x = 6

27y = 3 so y is equal to
1/9.
1/3.
9/1.

Determine x in the following: (2x-1)(3x+2) = 0.
1.5, 1
0.5, 3
-0.67, 0.5

194) (x + y + z)(x + y + z) =
2(x + y + z) 2x + 2y +2z (x + y + z)^2

195) If x in an equation equals Ly + 7cb, define the formula for finding the subject y.
x-7cb/L x+7cb/L x-L/7cb

196) 64y = 64
y=0 y=0.5
y=1

Simplify the following: 3a - 2b + 6a - 3b - 2a.
7a + 5b 7a - 5b 7a + b

Simplify 3x-2xy-3y +5xy-2x +2y.
x + 3xy - y 5x + 3xy - y x - 3xy + y