

Practice: Modelling With Formulas

1. The formula for area of a circle is $A = \pi r^2$ where r is the radius of the circle. Which is the formula rearranged to isolate r ?

A $r = \frac{A}{\pi}$

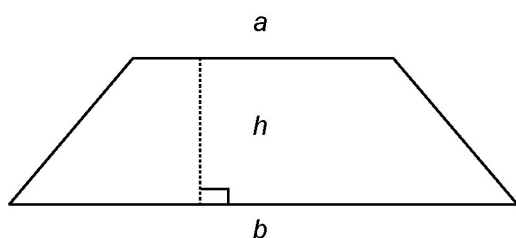
B $r = \pi A$

C $r = \sqrt{\pi A}$

D $r = \sqrt{\frac{A}{\pi}}$

2. The formula for the area of a trapezoid is

$$A = \frac{(a+b)h}{2}$$



Which is the formula rearranged to isolate h ?

A $h = \frac{2A}{a+b}$

B $h = 2A - (a+b)$

C $h = \frac{A(a+b)}{2}$

D $h = \frac{a+b}{2A}$

3. Rearrange each formula to isolate the variable indicated.

a) $P = 4s$ for s

b) $I = Prt$ for P

c) $A = \frac{bh}{2}$ for b

d) $P = 2(l+w)$ for l

e) $d = st$ for t

f) $V = \pi r^2 h$ for h

4. The approximate number of pounds, P , in a kilogram, K , is given by the formula $P = 2.2K$.

a) Christine's mass is 34 kg. Convert 34 kilograms to pounds.

b) Rearrange the formula to express K in terms of P .

c) Katherine weighs 78 pounds. Convert 78 pounds to kilograms.