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## 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 $h=\frac{2 A}{a+b}$
B $h=2 A-(a+b)$
C $h=\frac{A(a+b)}{2}$
D $h=\frac{a+b}{2 A}$
3. Rearrange each formula to isolate the variable indicated.
a) $P=4 s \quad$ for $s$
b) $I=$ Prt for $P$
c) $A=\frac{b h}{2} \quad$ for $b$
d) $P=2(l+w)$ for $l$
e) $d=s t \quad$ for $t$
f) $V=\pi r^{2} h \quad$ for $h$
4. The approximate number of pounds, $P$, in a kilogram, $K$, is given by the formula $P=2.2 \mathrm{~K}$.
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.

