

Rearranging formulas — One step

Name: _____

Date: _____

Rearrange each formula to make the named letter the subject.

1 $W = Fd$ for F
 $\frac{W}{d} = F$

2 $F = ma$ for m

3 $n = \frac{360}{e}$ for e

4 $C = \pi d$ for d

5 $E = mc^2$ for m

6 $P = a + b + c$ for a

7 $V = IR$ for I

8 $D = \frac{m}{V}$ for V



Rearranging formulas — Two steps

Name: _____

Date: _____

Rearrange each formula to make the named letter the subject.

1 $y - k = m(x - h)$ for m
 $\frac{y - k}{x - h} = m$

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

3 $A = \frac{1}{2}(a + b)h$ for h

4 $V = \frac{1}{3}Bh$ for h

5 $v = u + at$ for t

6 $F = \frac{9}{5}C + 32$ for C

7 $K = \frac{1}{2}mv^2$ for m

8 $P = 2l + 2w$ for l



Rearranging formulas — One and two steps

Name: _____

Date: _____

Rearrange each formula to make the named letter the subject.

1 $P = 2(l + w)$ for l

$$\frac{P}{2} = l + w$$
$$\frac{P}{2} - w = l$$

2 $V = lwh$ for l

3 $d = rt$ for t

4 $A = P + Prt$ for r

5 $V = \pi r^2 h$ for h

6 $K = \frac{1}{2}mv^2$ for m

7 $y - k = m(x - h)$ for m

8 $y = mx + b$ for b



Rearranging formulas — Two variables

Name: _____

Date: _____

Rearrange each equation to make the named letter the subject.

1 $3x + 7y = 12$ for x

$$\begin{aligned} 3x &= 12 - 7y \\ \frac{12 - 7y}{3} &= x \end{aligned}$$

2 $5x + 4y = 10$ for y

3 $9x + 5y = 12$ for y

4 $8x + 6y = 10$ for y

5 $3x + 2y = 24$ for y

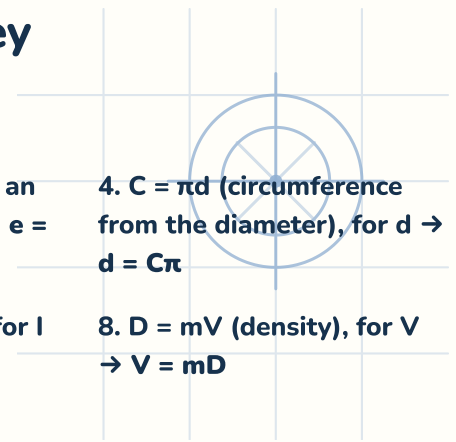
6 $3x + 9y = 6$ for x

7 $4x + 7y = 10$ for y

8 $9x + 7y = 24$ for y



Power Pack · Rearranging formulas — Answer key



One step

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|---|---|--|--|
| 1. $W = Fd$ (work done), for $F \rightarrow F = Wd$ | 2. $F = ma$ (force), for $m \rightarrow m = Fa$ | 3. $n = 360e$ (sides from an exterior angle), for $e \rightarrow e = 360n$ | 4. $C = \pi d$ (circumference from the diameter), for $d \rightarrow d = C\pi$ |
| 5. $E = mc^2$ (mass and energy), for $m \rightarrow m = Ec^2$ | 6. $P = a + b + c$ (perimeter of a triangle), for $a \rightarrow a = P - b - c$ | 7. $V = IR$ (Ohm's law), for $I \rightarrow I = VR$ | 8. $D = mV$ (density), for $V \rightarrow V = mD$ |

Two steps

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|---|---|--|--|
| 1. $y - k = m(x - h)$ (point-slope form), for $m \rightarrow m = y - kx - h$ | 2. $P = 2(l + w)$ (perimeter, factored), for $l \rightarrow l = P2 - w$ | 3. $A = 12(a + b)h$ (area of a trapezoid), for $h \rightarrow h = 2Aa + b$ | 4. $V = 13Bh$ (volume of a cone or pyramid), for $h \rightarrow h = 3VB$ |
| 5. $v = u + at$ (velocity after accelerating), for $t \rightarrow t = v - ua$ | 6. $F = 95C + 32$ (Fahrenheit from Celsius), for $C \rightarrow C = 5(F - 32)9$ | 7. $K = 12mv^2$ (kinetic energy), for $m \rightarrow m = 2Kv^2$ | 8. $P = 2l + 2w$ (perimeter of a rectangle), for $l \rightarrow l = P - 2w2$ |

Mixed

- | | | | |
|---|---|--|---|
| 1. $P = 2(l + w)$ (perimeter, factored), for $l \rightarrow l = P2 - w$ | 2. $V = lwh$ (volume of a box), for $l \rightarrow l = Vwh$ | 3. $d = rt$ (distance travelled), for $t \rightarrow t = dr$ | 4. $A = P + Prt$ (amount with simple interest), for $r \rightarrow r = A - PPt$ |
| 5. $V = \pi r^2 h$ (volume of a cylinder), for $h \rightarrow h = V\pi r^2$ | 6. $K = 12mv^2$ (kinetic energy), for $m \rightarrow m = 2Kv^2$ | 7. $y - k = m(x - h)$ (point-slope form), for $m \rightarrow m = y - kx - h$ | 8. $y = mx + b$ (equation of a line), for $b \rightarrow b = y - mx$ |

$ax + by = c$

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|--|--|--|--|
| 1. $3x + 7y = 12$ (a linear equation in two variables), for $x \rightarrow x = 12 - 7y3$ | 2. $5x + 4y = 10$ (a linear equation in two variables), for $y \rightarrow y = 10 - 5x4$ | 3. $9x + 5y = 12$ (a linear equation in two variables), for $y \rightarrow y = 12 - 9x5$ | 4. $8x + 6y = 10$ (a linear equation in two variables), for $y \rightarrow y = 10 - 8x6$ |
| 5. $3x + 2y = 24$ (a linear equation in two variables), for $y \rightarrow y = 24 - 3x2$ | 6. $3x + 9y = 6$ (a linear equation in two variables), for $x \rightarrow x = 2 - 3y$ | 7. $4x + 7y = 10$ (a linear equation in two variables), for $y \rightarrow y = 10 - 4x7$ | 8. $9x + 7y = 24$ (a linear equation in two variables), for $y \rightarrow y = 24 - 9x7$ |