4.1 Equations with variables on both sides

$5x-8=3x+12$

$-3x \quad -3x$

$2x-8=12$

$+8 \quad +8$

$\frac{2x}{2}=\frac{20}{2}$

$x=10$

$5(10)-8 \stackrel{?}{=} 3(10)+12$

$50-8 \stackrel{?}{=} 30+12$

$42 \stackrel{?}{=} 42$

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ex 5 pg 87 J = Jack's age

$20+4J=6J$

$-4J \quad -4J$

$\frac{20}{2}=\frac{2J}{2}$

$10=J$

$20+4(10)=6(10)$

$20+40=60$

$60=60$

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4.2 Equations with parentheses

$6x-3(4-5x)=30$

$6x-12+15x=30$ distribute

$21x-12=30$ $+12$

$21x=42$ $\div 2$

$x=2$

do the check!

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4.3 Number problems

Ex 1: l = large #

s = smaller #

$l=7s-6$

smaller # $=s$

larger # $=7s-6$

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Ex 2 f, s, t

$s=4f$

$t=1+s \Rightarrow 1+4f$

first # $=f$

second # $=4f$

third # $=1+4f$

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Ex 3 J = Julie's salary

L = Liz's salary

$J=3L$

$J+L=320$ too many vars (2)

$3L+L=320$

$4L=320$ $\div 4$

$L=80$

$J=3(80)=240$

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scrap

0.06 × 8 = .48

.06 × .6 = .036

.468 − .036 = .432

.900 − .432 = .468

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4.6 Percent problems

42 is what % of 75

$42 = x \cdot 75$

$\div 75$

$\frac{42}{75} = x$

$.56 = x \Rightarrow 56\%$

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percent

per cent

of 100

$\left[\frac{42}{75} = \frac{x}{100}\right] 100$

$\frac{42}{75}100 = x$

$(.56)100 = x \Rightarrow 56\%$

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93 % of 200 is ?

$.93 \cdot 200 = x$

$186 = x$

.5%

50% = $\frac{1}{2}$ = .50

.005

.01

$\frac{.01}{2}$

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4.7 Perimeter problems

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$a = 3 + b$

$c = 2b - 4$

$a + b + c = 31$

$(3+b) + b + (2b-4) = 31$

$-1 + 4b = 31$

$4b = 32$

$b = 8$

$b = 8$

$a = 3 + 8 = 11$

$c = 2(8) - 4 = 12$

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Chapter 4 homework

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