

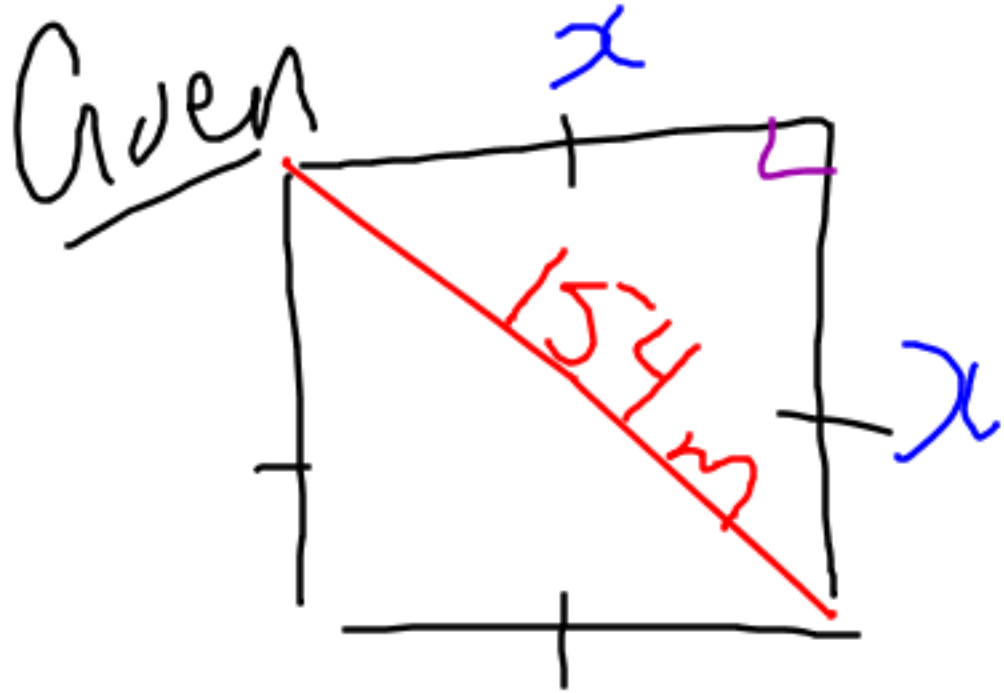
Given: Same \$ value in dimes and quarters. Quarters 15 fewer coins

Find: how many dimes value

Let x = # of quarters $0.25x$
then let $x + 15$ = # of dimes $0.10(x + 15)$

$$0.25x = 0.10(x + 15)$$

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$$a^2 + b^2 = c^2$$

$$x^2 + x^2 = (154)^2$$

$$\frac{2x^2}{2} = \frac{23716}{2}$$

$$x^2 = 11858$$

$$x = \sqrt{11858}$$

$$x = 108.89$$

Find: length
of sides

$\therefore$ the sides of the
pyramid are each
 109 m

369 Working with Formulas Dec. 13

1. For the formula $A = Lw$

a) find A , if $L = 8\text{cm}$ and $w = 5\text{cm}$

$$A = L \times w$$

$$A = (8)(5)$$

$$A = 40\text{cm}^2$$

b) Find w , if $A = 40\text{m}^2$ ($L = 10\text{m}$)

$$\frac{A}{L} = \frac{Lw}{L}$$

$$w = \frac{A}{L}$$

$$\rightarrow w = \frac{40}{10}$$

$$w = 4\text{m}$$

2. $C = 2\pi r$ Circumference
radius

a) find C , if $r = 10 \text{ cm}$

$$C = 2\pi r$$

$$C = 2(3.14)(10)$$

$$C = 62.8 \text{ cm}$$

b) find r , if $C = 62.8 \text{ cm}$

$$\frac{C}{2\pi} = \frac{2\pi r}{2\pi}$$

$$r = \frac{C}{2\pi}$$

$$r = \frac{62.8}{2\pi} = \frac{62.8}{6.28} = 10 \text{ cm}$$

3. $A = \frac{1}{2}bh$ area of triangle

a) find A , if $b = 6\text{cm}$ and $h = 8\text{cm}$

$$A = \frac{1}{2}bh$$

$$A = \frac{(6)(8)}{2}$$

$$A = \frac{48}{2}$$

$$A = 24\text{cm}^2$$

b) find h , if $A = 40\text{cm}^2$

~~$b = 4\text{cm}$~~

$$A = \frac{1}{2}bh$$

$$\frac{2A}{1} = \frac{2bh}{2}$$

$$\frac{2A}{b} = \frac{bh}{b}$$

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

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

$$h = \frac{2(40)}{4}$$

$$h = \frac{80}{4}$$

$$h = 20\text{cm}$$

$$4. P = 2(L + w)$$

a) find P if $L = 9m$ and $w = 6m$

$$P = 2(L + w)$$

$$P = 2(9 + 6)$$

$$P = 2(15)$$

$$P = 30m$$

$$w = \frac{28}{2}$$

$$w = 14m$$

b) Find w , if $P = 60m$ and $L = 16m$

$$P = 2(L + w)$$

$$P - 2L = 2w$$

$$\frac{P - 2L}{2} = \frac{2w}{2}$$

$$w = \frac{P - 2L}{2}$$

$$w = \frac{60 - 2(16)}{2}$$

$$w = \frac{60 - 32}{2}$$

9. $\frac{E}{c^2} = \frac{mc^2}{c^2}$, for m

$$m = \frac{E}{c^2}$$

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

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

$$2A = ha + hb$$

$$\frac{2A - ha}{h} = b$$

$$\frac{2A - ha}{h} = b$$

$$\text{or } \frac{2A}{h} - a = b$$

HWK: p. 369

hand out - Pythagorean
Theorem

Review p. 1

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