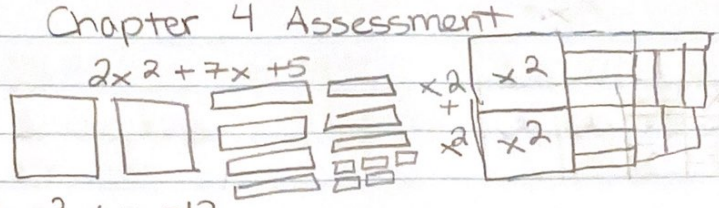
to

SOHCAHTOA

Chapter 4 Assessment

1) $2x^2 + 7x + 5$



2) $6x^2 + 6x - 12$

a. $(x-1)(x+2)$

$x^2 + 2x - x + 2$

$6(x^2 + x - 2)$

b. $(6x-6)(x+2)$

$6x^2 + 12x - 6x + 12$

$6x^2 + 6x + 12$

c. $(x-6)(6x+2)$

$6x^2 + 2x - 36x + 12$

$6x^2 - 34x + 12$

d. $(3x-3)(2x+4)$

$6x^2 + 12x - 6x + 12$

$6x^2 + 6x + 12$

C is not a possible answer because 2x minus 36x equals -34x instead of 6x which makes the answer wrong.

3) a. $(x+12)(2x-1)$

$2x^2 - x + 24x - 12$

b. $(y+1)(y+7)$

d. $(15p+3)(p-1)$

$15p^2 - 15p + 3p - 3$

c. $(5m-\ )(m+\ )$

This cannot be factored because the factors of 8 dont match the polynomials.

4) $\tan(44) = \frac{98}{x}$

$0.97 = 98 \div x$

$98 / 0.97 = 101.0 = x$

5) $\cos(21) = \frac{125}{x}$ $0.93 = \frac{125}{x}$

$125 \div 0.93 = 134.4 = x$

6) $\tan\theta = \frac{27}{38}$ $\theta = \tan^{-1}(27/38)$

$\theta = 35.4°$

7) $\cos\theta = \frac{13}{20}$ $\theta = \cos^{-1}(13/20)$

$0.65 = 13/20$ $\theta = 49.5$

8) $\sin\theta = \frac{12}{24} = \sin^{-1}(12/24)$ $0.5 = 12/24$

$\theta = 30$

9) $\cos\theta = \cos^{-1}(12/14)$ $.86 = 12/14$

$\theta = 30.7 = \angle A$

$\angle C = 90°$ $\angle A = 30.7°$ $90 - 30.7 = 59.3$

$\angle B = 59.3°$

$\cos 59.3 = x/14$

$0.51 = x/14$ $0.51 \cdot 14 = 7.14 = x$

$7.14 = a$

10) $\angle B = 90° - 49° = 41°$ $\angle B = 41°$

$\cos 49° = 8/x$

$0.66 = 8/x \rightarrow 8/0.66$

$x = 12.1$ $a = 12.12$

$c = 8^2 + b^2 = 12.12^2$

$64 + b^2 = 146.9$

$-64 \quad -64$

$b^2 = 82.9$

$b = 9.1$ $c = 9.1$