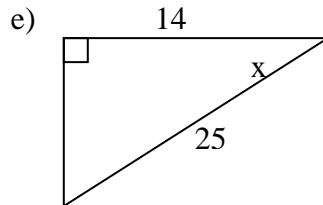
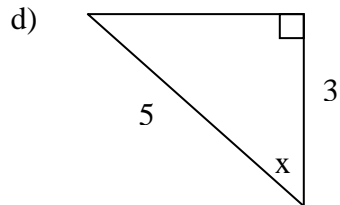
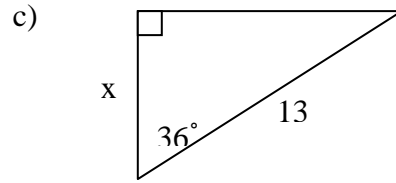
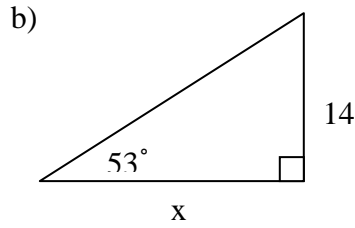
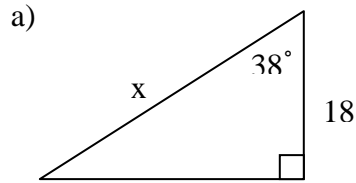


Math 101/2**Pre-Exam Review #3**

1. Solve for the value of x in each of the following right angle triangles:



Answers:

a) 22.8

b) 10.5

c) 11.0

d) 53°

e) 56°

2. Solve for x .

a) $\frac{1}{3}x + \frac{5}{6} = 2$

b) $\frac{x+5}{4} = 2 - x$

c) $6(2x - 1) + 4(1 - 2x) = 3(4x - 2)$

d) $1 + \frac{3x - 4}{2} = \frac{3 - x}{4}$

e) $\frac{x+1}{5} - \frac{2x-1}{4} = 1$

Answers:

a) $\frac{7}{2}$

b) $\frac{3}{5}$

c) $\frac{1}{2}$

d) 1

e) $\frac{3}{2}$

3. Evaluate each function:

a) $f(n) = n^3 - 3n^2$; Find $f(2)$

b) $w(x) = x^3 - 4x$; Find $w(-4)$

c) $k(t) = t + 1$; Find $k(9)$

d) $g(a) = 3a - 2$

$h(a) = a^3 + 3$

Find $g(-2) \cdot h(-2)$

e) $g(n) = 4n + 5$

$h(n) = 4n + 3$

Find $g(-8) + h(-8)$

Answers:

a) -4 b) -48 c) 10 d) 40 e) -56

4. State the missing forms of each of the following quadratic functions:

Mapping Notation	Transformational Form	Standard Form	General Form
$(x, y) \rightarrow (x + 3, 2y - 1)$			
	$\frac{1}{4}(y + 6) = (x + 3)^2$		
		$y = 3(x + 7)^2 + 4$	
			$y = x^2 + 8x - 16$

Answers:

Given	$\frac{1}{2}(y + 1) = (x - 3)^2$	$y = 2(x - 3)^2 - 1$	$y = 2x^2 - 12x + 17$
$(x, y) \rightarrow (x - 3, 4y - 6)$	Given	$y = 4(x + 3)^2 - 6$	$y = 4x^2 + 24x + 42$
$(x, y) \rightarrow (x - 7, 3y + 4)$	$\frac{1}{3}(y - 4) = (x + 7)^2$	Given	$y = 3x^2 + 42x + 151$
$(x, y) \rightarrow (x - 4, y)$	$y = (x + 4)^2$	$y = (x + 4)^2$	Given

5. State the order of each of matrix below:

$$\begin{pmatrix} 4 & 6 \\ -6 & 1 \end{pmatrix}$$

$$\begin{pmatrix} 0 & 5 \\ 1 & 6 \\ 4 & -6 \end{pmatrix}$$

$$\begin{pmatrix} 36 & 21 \\ -28 & -31 \\ 32 & 24 \\ 16 & 0 \end{pmatrix}$$

$$[6 \quad 7 \quad 2 \quad -9]$$

Answers:

2 x 2

3 x 2

4 x 2

1 x 4