

Pre-Calculus 11: Basic Skills Assignment #3

1. Solve. Show work.

a) $2x + 8 = 20$

b) $2x - 8 = 20$

c) $-2x + 8 = 20$

d) $-2x - 8 = 20$

e) $5x + 10 = 2x + 4$

f) $5x + 8 = 2x - 4$

g) $5x + 10 = -2x - 4$

h) $-5x + 10 = -2x + 4$

i) $x + 4 = -x + 20$

j) $5x - 8 = x + 4$

2. Solve.

a) $x + 4 = 0$

b) $x - 3 = 0$

c) $2x + 5 = 0$

d) $3x - 10 = 0$

3. Solve. Show work.

a) $12(x+3)=5(2x+8)$

b) $2x+18=16-4(x+7)$

c) $6(5x-8)-20=11(2x-3)+3x$

d) $4x-(9-3x)=8x-1$

4. Solve for x. (*Isolate the x.*)

a) $ax = b$

b) $ax + b = c$

c) $ax - b = c$

d) $ax + b = -c$

e) $abx - c = d$

f) $x^2 = b$

5. Fill in each missing value in the following products.

a) $5 \times \underline{\hspace{2cm}} = 0$

b) $\underline{\hspace{2cm}} \times 5 = 0$

c) $-3 \times \underline{\hspace{2cm}} = 0$

d) $\underline{\hspace{2cm}} \times (-3) = 0$

e) $0 \times \underline{\hspace{2cm}} = 0$

f) $0 \times \underline{\hspace{2cm}} = 0$ Provide a different answer than for part e).

g) $\underline{\hspace{2cm}} \times 0 = 0$

h) $\underline{\hspace{2cm}} \times 0 = 0$ Provide a different answer than for part g).

6. Use the results of #5 e-h to fill in each blank using words.

a) $0 \times \underline{\hspace{4cm}} = 0$

b) $\underline{\hspace{4cm}} \times 0 = 0$

7. Use the results of #5 to answer the following question.

If $A \times B = 0$, what must be true about A and B?

8. Find the value of $(x - 2)(x + 5)$ if $x = 2$.

9. Find the value of $(x - 2)(x + 5)$ if $x = -5$.

10. Use the results of #8 and #9 to solve $(x - 2)(x + 5) = 0$.

11. Match each term with an expression or a diagram which illustrates its meaning.
Write the letter of the expression or diagram in the space provided.

_____ 1. Maximum

_____ 2. Minimum

_____ 3. Area

_____ 4. Perimeter

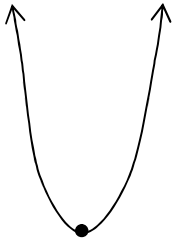
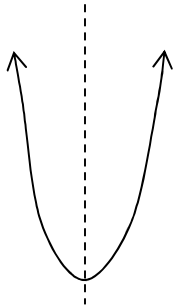
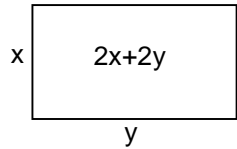
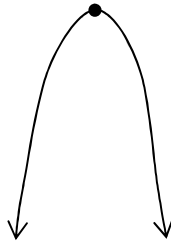
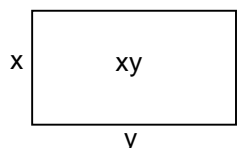
_____ 5. Sum

_____ 6. Difference

_____ 7. Product

_____ 8. Revenue

_____ 9. Axis of Symmetry

<p>A.</p> 	<p>B.</p> <p>$x + y$</p>	<p>C.</p> 
<p>D.</p> 	<p>E.</p> 	<p>F.</p> <p>$x - y$</p>
<p>G.</p> <p>xy</p>	<p>H.</p> 	<p>I.</p> <p>\$5 per item x items sold</p> <p>\$5x</p>

Pre-Calculus 11: Basic Skills Assignment #3 - Answers

1. a) $x = 6$
c) $x = -6$
e) $x = -2$
g) $x = -2$
i) $x = 8$
b) $x = 14$
d) $x = -14$
f) $x = -4$
h) $x = 2$
j) $x = 3$
2. a) $x = -4$
c) $x = -\frac{5}{2}$ or -2.5
b) $x = 3$
d) $x = \frac{10}{3}$
3. a) $x = 2$
c) $x = 7$
b) $x = -5$
d) $x = -8$
4. a) $x = \frac{b}{a}$
c) $x = \frac{c+b}{a}$
e) $x = \frac{d+c}{ab}$
b) $x = \frac{c-b}{a}$
d) $x = \frac{-c-b}{a}$
f) $x = \pm\sqrt{b}$
5. a) 0
c) 0
e) 0
g) 0
b) 0
d) 0
f) 1 or 2 or -1 or 0.4 or etc.
h) 1 or 2 or -1 or 0.4 or etc.
6. a) any real number
b) any real number
7. Either A must be zero or B must be zero.
8. 0
9. 0
10. $x = 2$ or $x = -5$
11. E1, A2, H3
D4, B5, F6
G7, I8, C9