Algebra II   Name_____

#2 HW

Write an algebraic **expression** to represent each situation.

9. the measure of the supplement of an angle whose measure is $x°$	10. the number of $0.60 bagels that can be purchased with d dollars
$180-x$	$\dfrac{d}{.60}$

Evaluate each for the given values of the variables.

11. $6c-3c^2+d^3$ for $c=5$ and $d=3$	14. $\dfrac{2s-t^2}{st^2}$ for $s=5$ and $t=3$
$6(5)-3(5)^2+(3)^3$ $\boxed{-18}$	$\dfrac{2(5)-(3)^2}{(5)(3)^2}=\boxed{\dfrac{1}{45}}$

Simplify each **expression**.

15. $-x-3y+4x-9y+2$	18. $x(4+y)-2x(y+7)$
$\boxed{3x-12y+2}$	$4x+xy-2xy-14x$ $\boxed{-10x-xy}$

Simplify each express. Then evaluate the expression for the given values of the variables.

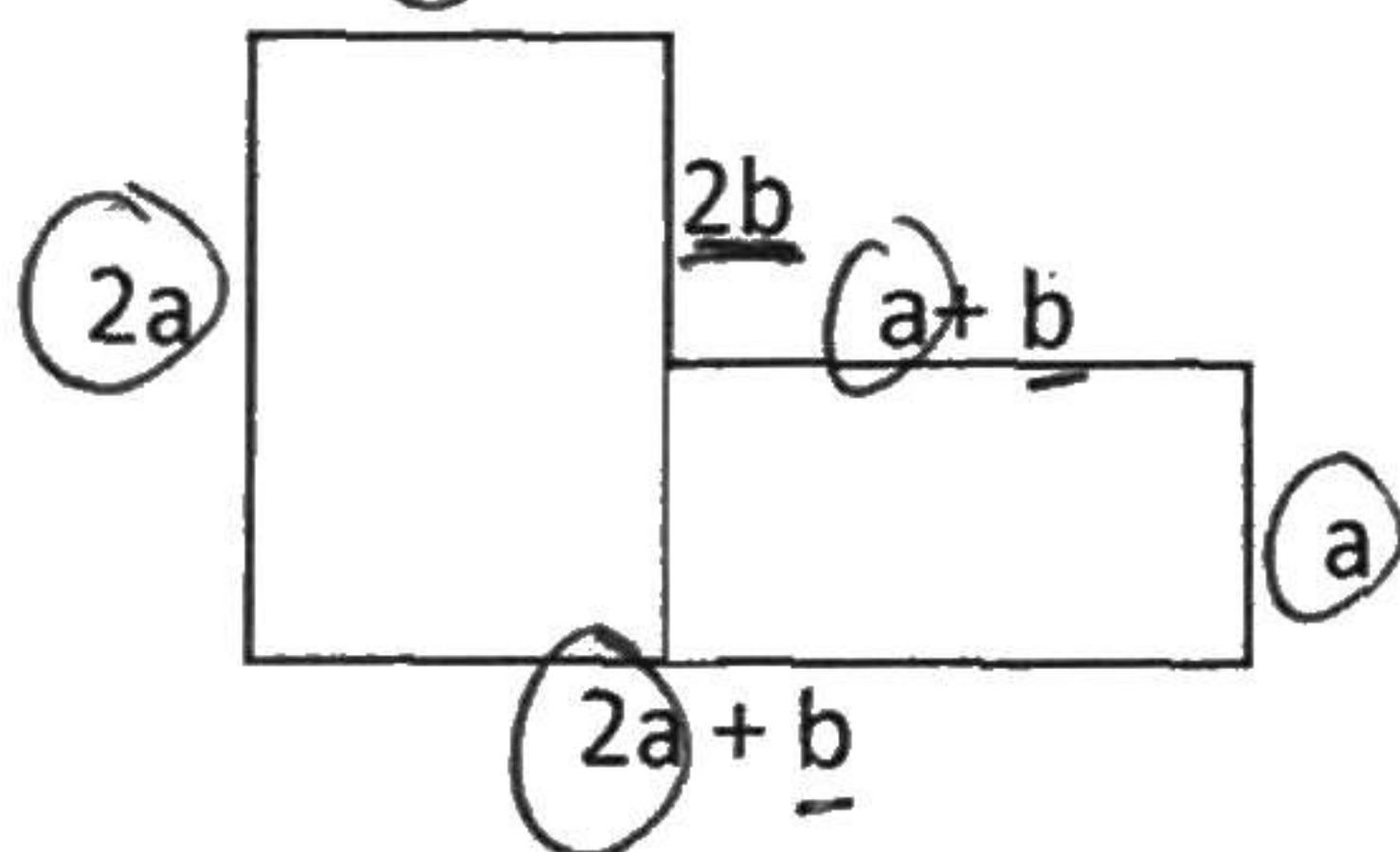| 20. $-a(a^2+2a-1)$ for $a=2$	21. $(2g-1)^2-2g+g^2$ for $g=3$
$-a^3-2a^2+a$ $-(2)^3-2(2)^2+2$ $\boxed{-14}$	$4g^2-4g+1-2g+g^2$ $5g^2-6g+1$ $5(3)^2-6(3)+1$ $\boxed{28}$

Write and simplify an expression for the perimeter of each figure.

27. $a+2a+2a+b+a+a+b+2b$ $7a+4b$	28. $3x^2+6x-1$
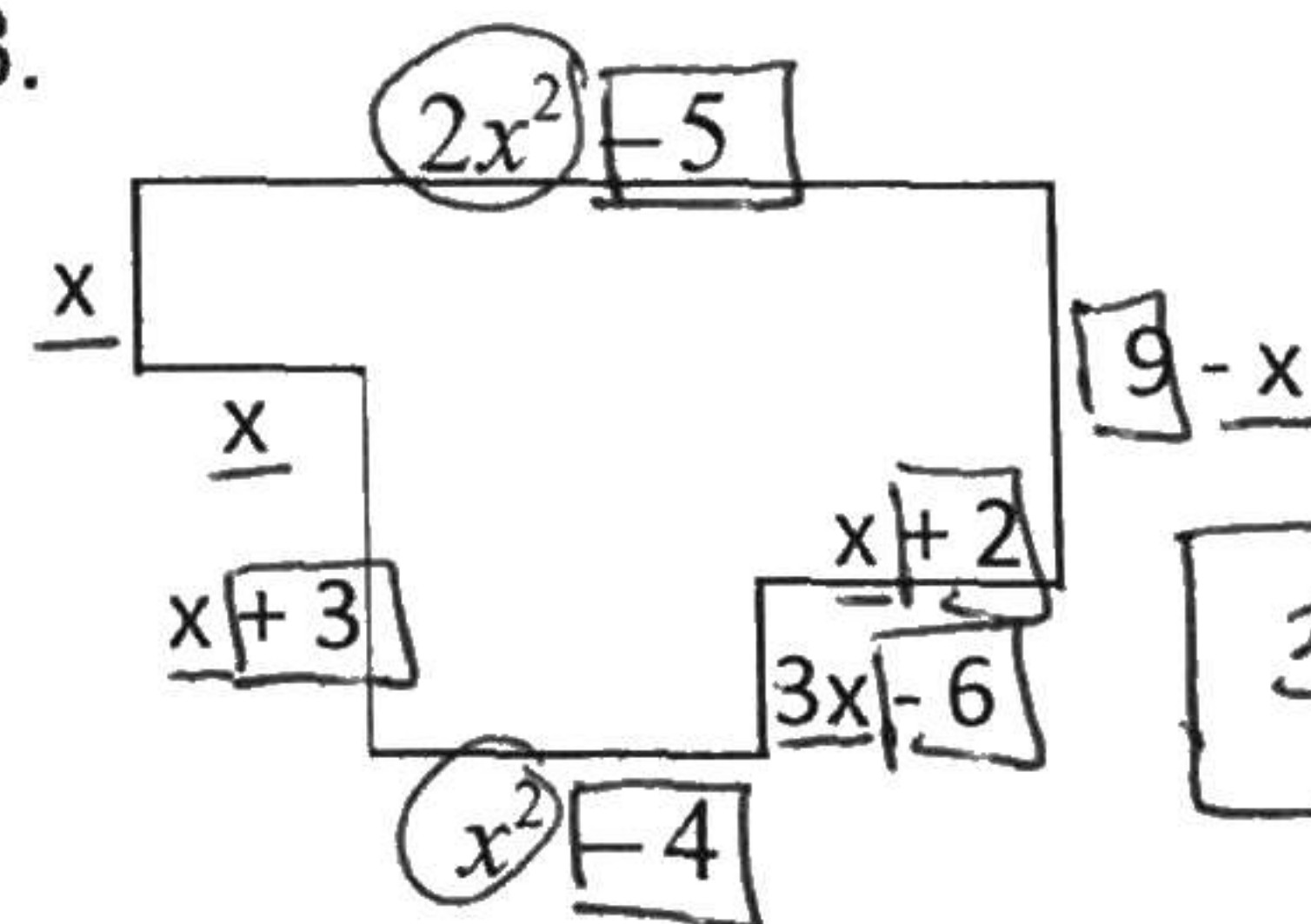
Solve each problem. Show ALL WORK!!

29. The Dane family is going on a 15-day vacation to travel with relatives. They budget $100 per day when visiting relatives and $275 per day when traveling.	30. While Neil Armstrong and Buzz Aldrin walked on the Moon, the *Apollo 11* command module completed 1 orbit every 119 minutes.
A) Write an expression for the total budgeted cost of the vacation if they visit relatives for d days. $275(15-d)+100d$	A) Write an expression for the time in minutes needed to complete n orbits. $\underline{119n}$
B) What is the budgeted cost if they stay with relatives for 5 days? $\underline{\$3250}$	B) The *Apollo 11* module made 30 orbits. For how many **hours** did it orbit the moon? $\underline{59.5\ hours}$
C) How does this cost change for each additional day they stay with relatives? they would save $175 per day	C) Estimate the number of orbits the *Apollo 11* module would make in 1 week if it continued at the same rate? approx 84.7