

NAME: _____

PERIOD: _____

Solve and graph the solution.

1. $-3 < j + 2 < 7$ _____

5. $3 = |m + 2|$ _____



2. $7 \leq 3 - 2p < 11$ _____

6. $|2c - 5| < 9$ _____



3. $1.5 < w + 3 \leq 6.5$ _____

7. $-3|y - 3| = 9$ _____



4. $\frac{1}{2} < \frac{3x - 1}{4} < 2$ _____

8. $\left| \frac{1}{2}a \right| + 1 \geq 3$ _____



Solve for the indicated variable.

9. $C = \frac{5}{9}(F - 32)$; F

10. $Q = wc(T_1 = T_2)$; T_2

11. Two planes were flown a total of 54 hours in one month. One plane rents for \$105/hr and the other rents for \$130/hr. The total income from the two planes was \$6570. Find the number of hours each plane was flown for the month (**Hint:** Setup a system of equations).

12. A small-cylinder engine was operated on a test stand for 14 minutes. It was run first at 850 rpm and was then increased to 1250 rpm. A total of 15,500 revolutions were counted during the test. How long did the engine operate at each speed?

13. Find the equation of the altitude \overline{AD} for $\triangle ABC$ where $A(1,1)$, $B(4,5)$ and $C(3,-1)$.