Solving Equations 11
Geometry

Solve, check, and graph the following equations.

1) $-5(4 + m) = 15$

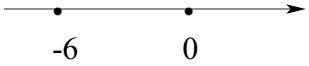
$m = -7$

2) $\frac{-132}{4} = \frac{4(-9 + 4q)}{4}$

$-33 = -9 + 4q$
$+9 \quad +9$
$\frac{-24}{4} = \frac{4q}{4}$

$-6 = q$

✓ $-132 = 4(-9 + 4(-6))$
$-132 = 4(-9 + (-24))$
$-132 = 4(-33)$
$-132 = -132$ ✓



3) $-201 = 3(7x - 4)$

$x = -9$

4) $3x - 10x = -35$

$x = 5$

5) $p - 9p = 56$

$\frac{-8p}{-8} = \frac{56}{-8}$

$p = -7$

✓ $(-7) - 9(-7) = 56$
$-7 + 63 = 56$
$56 = 56$ ✓

6) $3d = -39 - 10d$
$+10d \quad +10d$

$\frac{13d}{13} = \frac{-39}{13}$

$d = -3$

✓ $3(-3) = -39 - 10(-3)$
$-9 = -39 + 30$
$-9 = -9$ ✓

7) $9g = 8g - 10$

$g = -10$

8) $13j + 39 = 67 + 9j$
$-9j \quad -9j$

$4j + 39 = 67$
$-39 \quad -39$

$\frac{4j}{4} = \frac{28}{4}$

$j = 7$

✓ $13(7) + 39 = 67 + 9(7)$
$91 + 39 = 67 + 63$
$130 = 130$ ✓

9) $-8a + 2a + 13 = 73$

$a = -10$

10) $-12 + 7c - 15c + 31 = -77$

$-8c + 19 = -77$
$-19 \quad -19$

$\frac{-8c}{-8} = \frac{-96}{-8}$

$c = 12$

✓ $-12+7(12)-15(12)+31= -77$
$-12 + 84 - 180 + 31 = -77$
$-77 = -77$ ✓

11) $-25 - 6x = -79 + 3x$

$x = 6$

12) $-12w + 6 = -6(4 + 3w)$

$-12w + 6 = -24 - 18w$

$+18w \qquad +18w$

$6w + 6 = -24$

$-6 \quad -6$

$\frac{6w}{6} = \frac{-30}{6}$

$w = -5$

✓ $-12(-5) + 6 = -6(4 + 3(-5))$

$60 + 6 = -6(4 - 15)$

$66 = -6\ (-11)$

$66 = 66$ ✓

13) $-4x + 4 = -2(10 - x)$

$x = 4$