

Unit 9.2 Absolute Value Equations and Complex numbers PRACTICE

Period _____

Find the absolute value of each complex number.

1) $|4 + 2i|$
 $2\sqrt{5}$

2) $|8 + 2i|$
 $2\sqrt{17}$

3) $|-6 - 3i|$
 $3\sqrt{5}$

4) $|-5 - 3i|$
 $\sqrt{34}$

5) $|-4 - 9i|$
 $\sqrt{97}$

6) $|6 + 4i|$
 $2\sqrt{13}$

7) $|2 + i|$
 $\sqrt{5}$

8) $|-4 - 8i|$
 $4\sqrt{5}$

9) $|2 + 6i|$
 $2\sqrt{10}$

10) $|-8 + 9i|$
 $\sqrt{145}$

Solve each equation.

11) $|n| = 10$
 $\{10, -10\}$

12) $|a| = -10$
No solution.

13) $9|m| = 18$
 $\{2, -2\}$

14) $|m| + 8 = -2$
No solution.

$$15) \left| \frac{n}{4} \right| = 0$$
$$\{0\}$$

$$16) |x + 8| = 0$$
$$\{-8\}$$

$$17) |10n| + 4 = 44$$
$$\{4, -4\}$$

$$18) 7 \left| \frac{x}{6} \right| = 7$$
$$\{6, -6\}$$

$$19) -4 + |7 - 2b| = 17$$
$$\{-7, 14\}$$

$$20) 9|3 + 10b| + 5 = 32$$
$$\left\{0, -\frac{3}{5}\right\}$$

$$21) 8|7 + a| + 8 = 120$$
$$\{7, -21\}$$

$$22) 6 - 6|3p - 9| = 6$$
$$\{3\}$$

$$23) 9|8v + 2| + 1 = 91$$
$$\left\{1, -\frac{3}{2}\right\}$$

$$24) 9|7 + 4x| - 2 = -2$$
$$\left\{-\frac{7}{4}\right\}$$

$$25) -7 - 6|8r + 3| = -85$$
$$\left\{\frac{5}{4}, -2\right\}$$

$$26) -5|6a + 9| - 5 = -110$$
$$\{2, -5\}$$

$$27) 4|4x - 2| + 3 = -5$$
$$\text{No solution.}$$

$$28) -8|6a - 3| + 8 = -112$$
$$\{3, -2\}$$

$$29) |9 + n| - 2 = 11$$
$$\{4, -22\}$$

$$30) 4|1 + 2b| + 10 = 54$$
$$\{5, -6\}$$