Chapter 4 Review

Find the value of each expression at the indicated x-value.

1. $3x - 12$ when $x = 2$

2. $-5x + 1$ when $x = 3$

3. $4x - 7$ when $x = -1$

4. $x^2 - 3x + 2$ when $x = 0$

5. $3x^2 - 2x + 7$ when $x = -2$

Test each value to determine if it is a solution of the given equation.

6. $4x - 3 = -7$, $x = -1$

7. $2x - 1 = 3x + 1$, $x = 5$

8. $5x - 2 = -17$, $x = -3$

Solve each equation. Show all steps.

9. $x + 5 = -8$

10. $x - 2 = 14$

11. $\frac{2}{3}x = 18$

12. $4x + 1 = 1$

13. $3x - 7 = 5x + 7$

14. $2(x - 5) = -30$

15. $3(2x + 3) = -3(x - 5)$

16. $6(3x - 2) - 8 = 4x - 6$

17. $4x + 8 = 2x - 10$

18. $5x + \frac{3}{8} = -\frac{1}{4}$

19. $\frac{7}{x} - \frac{2}{5} = 1$

20. $\frac{x}{6} + \frac{x}{2} = 8$

21. $3x + \frac{1}{2} = \frac{3}{4}$

22. $\frac{x}{3} + \frac{1}{2} = -\frac{1}{2}$

23. $\frac{x}{2} + \frac{4}{3} = -\frac{2}{3}$

Solve each word problem. Identify the quantity that the variable represents, write an equation, solve the equation, and state your answer in English words.

24. Twice the sum of a number and 3 is –10. Find the number.

25. If 38 is subtracted from 3 times a number, the result is 1. Find the number.

26. The length of a rectangle is 4 cm. longer than its width. If the perimeter is 28 cm. find the length and width.

Answers:

Match each answer to the corresponding problem.

a.	yes	n.	5
b.	–6	o.	–9
c.	–4	p.	$\frac{2}{3}$
d.	no	q.	1
e.	12	r.	27
f.	$-\frac{1}{8}$	s.	$\frac{1}{12}$
g.	yes	t.	0
h.	–3	u.	–7
i.	–14	v.	16
j.	–11	w.	–10
k.	–13	x.	13
l.	2	y.	9 cm, 5 cm
m.	23	z.	–8