

1. (a) Use braces and digits to designate the set of natural numbers.
(5)
- (b) Use braces and digits to designate the set of whole numbers.
- (c) Use braces and digits to designate the set of integers.
2. What do we call the point on the number line with which we associate the number zero?
(4)
3. (a) What is the graph of a number?
(4)
- (b) What is the coordinate of a point on the number line?
- (c) How can we tell if one number is greater than another number?

Simplify:

4. $|-8|$
(5)

5. $|+8|$
(5)

6. $|-12|$
(5)

7. $-|15 - 5|$
(5)

8. $-|-15 + 5|$
(5)

9. $|12 - 30|$
(5)

Draw a number line for each of the following problems and use directed numbers (arrows) to add the signed numbers.

10. $(+3) + (-8)$
(5)

11. $(-1) + (+2)$
(5)

12. $(+4) + (+3)$
(5)

13. $(-4) + (+2) + (-4) + (+8)$
(5)

14. Use one unit multiplier to convert 28 centimeters to inches ($2.54 \text{ cm} = 1 \text{ in.}$).
(4)

15. Use two unit multipliers to convert 42 centimeters to feet. (Go from centimeters to inches to feet.)
(4)

16. The length of a rectangle is 22 inches. The width of the rectangle is 13 inches. Find the perimeter of the rectangle.
(3)

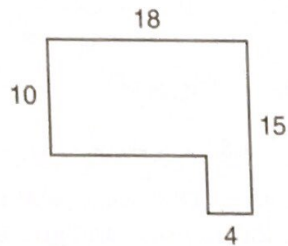
17. The radius of a circle is 10 feet. Find the circumference of the circle.

(3)

Find the perimeter of each figure. Corners that look square are square. Dimensions are in yards.

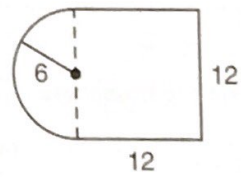
18.

(3)



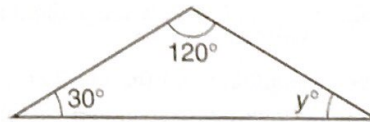
19.

(3)



20. Find y .

(2)



Add, subtract, multiply, or divide as indicated:

21. $6\frac{2}{3} + 7\frac{4}{9}$

(1)

22. $95\frac{1}{8} - 4\frac{13}{16}$

(1)

23. $4\frac{1}{2} \times 2\frac{2}{3}$

(4)

24. $4\frac{1}{2} + 7\frac{3}{8}$

(4)

25. $7\frac{1}{8} \div 4\frac{2}{5}$

(4)

26. $23.0106 + 0.1094$

(4)

27. $48.2 - 13.34$

(4)

28. 8.08×0.120

(4)

29. $8.48636 \div 2.12$

(4)

30. XZ is $18\frac{2}{3}$ miles. XY is $6\frac{1}{15}$ miles. Find YZ .

(1)

