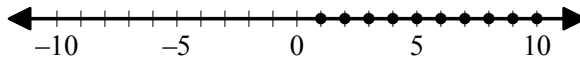
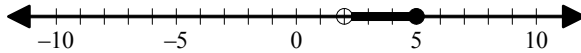


1. Simplify: $4\sqrt{3} + 2\sqrt{3} - 3\sqrt{3}$
2. Tom's test scores were 80, 69, 77, and 72. What was his weighted average if the tests were weighted 2, 3, 2, and 4, respectively? Round your answer to the nearest whole number.
3. In the Olympics, the athlete received an 85% score on the compulsory exercises, which were weighted 80%. In the optional round, weighted 20% , the athlete received a 95%. What was the athlete's weighted average?
4. Simplify: $5\sqrt{7} + 3\sqrt{7} - 4\sqrt{7}$
5. In the Olympics, the athlete received an 80% score on the compulsory exercises, which were weighted 65%. In the optional round, weighted 35% , the athlete received a 70%. What was the athlete's weighted average?
6. Simplify: $8\sqrt{5} + 5\sqrt{5} - 2\sqrt{5}$
7. Dorthea's test grades were 87, 78, 89, and 86. What was her weighted average if the tests were weighted 1, 4, 3, and 5, respectively? Round your answer to the nearest whole number.
8. In the Olympics, the athlete received a 90% score on the compulsory exercises, which were weighted 70%. In the optional round, weighted 30% , the athlete received a 75%. What was the athlete's weighted average?
9. Simplify: $2\sqrt{2} + 6\sqrt{2} - 5\sqrt{2}$
10. Sandra's test scores were 73, 92, 83, and 74. What was her weighted average if the tests were weighted 2, 4, 4, and 3, respectively? Round your answer to the nearest whole number.
11. Simplify: $9\sqrt{5} + 5\sqrt{5} - 3\sqrt{5}$
12. Justin's test grades were 95, 75, 82, and 88. What was his weighted average if the tests were weighted 3, 1, 2, and 5, respectively? Round your answer to the nearest whole number.

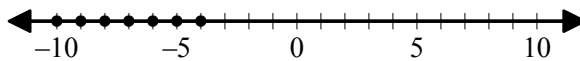
13. Write an inequality whose solution is the graph shown below. Remember to designate the domain.



14. Write a conjunction that describes this graph. Specify the domain.

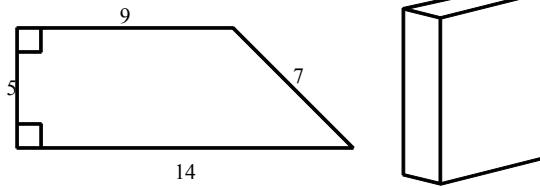


15. Graph the following inequality on a number line: $x + 2 \geq 0$; $D = \{\text{Real numbers}\}$
16. Write an inequality whose solution is the graph shown below. Remember to designate the domain.

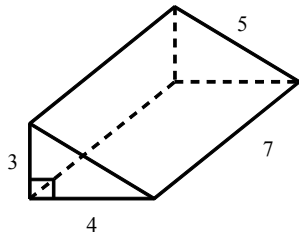


17. Graph the following inequality on a number line: $x - 4 \leq -7$;
 $D = \{\text{Negative integers}\}$
18. Simplify: $\sqrt{120}$
19. Indicate whether each of the following numbers is a rational or an irrational number.
(a) $3\sqrt{26}$ (b) $3\sqrt{3}$ (c) -1 (d) $\sqrt{3+5}$
20. Given the sets $A = \{1, 2, 3\}$, $B = \{0, 1, 2, 3, \dots\}$, and $C = \{0, 1, 2\}$, tell which of the following statements are true and which are false.
a) $A \not\subset C$ b) $C \subset A$ c) $A \subset C$ d) $C \not\subset B$
21. Tell whether each of the following statements is true or false:
(a) $\{\text{Rationals}\} \subset \{\text{Integers}\}$ (b) $\{\text{Naturals}\} \subset \{\text{Wholes}\}$
22. (a) $5\sqrt[3]{-8} \in \{\text{What subsets of the real numbers}\}$? (b) $2\sqrt{7} \in \{\text{What subsets of the real numbers}\}$?
23. (a) $3\sqrt[4]{81} - 2\sqrt{49} \in \{\text{What subsets of the real numbers}\}$? (b) $\sqrt{3} - \sqrt{81} \in \{\text{What subsets of the real numbers}\}$?

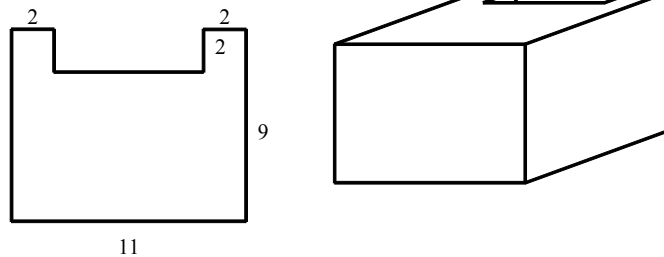
24. A base of a right prism whose height is 8 meters is the trapezoid shown. Find the surface area of the prism. Dimensions are in meters.



25. Find the volume and the total surface area of the right triangular prism. Dimensions are in meters.



26. A base of a right prism whose height is 8 yards is shown. Find the volume of the prism. All angles are right angles. Dimensions are in yards.



27. Find the lateral surface area of this right prism whose bases are regular pentagons. Dimensions are in inches.

