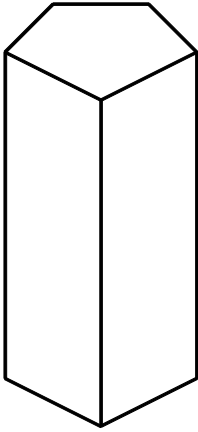
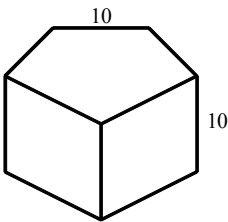


1. $\sqrt{22}$ is between what two consecutive whole numbers?
2. Evaluate: $6^2 - 2^2 \pm \sqrt{16}$
3. Simplify: $-5\{[(-2-3)-(-2^0-5)-2]-6\} \pm \sqrt{9}$
4. Evaluate: $\frac{-b \pm \sqrt{b}}{2a}$ if $b - 1 = 63$ and $a = \frac{b}{32}$
5. Evaluate. Do not use a calculator. $\sqrt{36} - \sqrt{144} + \sqrt{25} + \sqrt{16}$
6. $\sqrt{23}$ is between what two consecutive whole numbers?
7. Evaluate: $5^2 - 3^2 \pm \sqrt{4}$
8. Simplify: $-5\{[(-6-3)-(-5^0-2)-4]-6\} \pm \sqrt{4}$
9. Evaluate: $\frac{-b \pm \sqrt{b}}{2a}$ if $b - 1 = 63$ and $a = \frac{b}{16}$
10. Evaluate. Do not use a calculator. $\sqrt{36} - \sqrt{144} + \sqrt{25} + \sqrt{16}$
11. $\sqrt{56}$ is between what two consecutive whole numbers?
12. Evaluate: $3^2 - 2^2 \pm \sqrt{4}$
13. Simplify: $-4\{[(-5-3)-(-2^0-3)-5]-3\} \pm \sqrt{25}$
14. Given the sets $A = \{8, 9, 10\}$, $B = \{7, 8, 9, 10, \dots\}$, and $C = \{7, 8, 9\}$, tell which of the following statements are true and which are false.
 - a) $A \not\subset C$
 - b) $A \subset C$
 - c) $C \subset A$
 - d) $A \subset B$

15. Tell whether each of the following statements is true or false:
 (a) $\{\text{Rationals}\} \subset \{\text{Reals}\}$ (b) $\{\text{Naturals}\} \subset \{\text{Integers}\}$
16. (a) $\frac{1}{2}\sqrt[3]{-27} \in \{\text{What subsets of the real numbers}\}$? (b) $5\sqrt[3]{-125} \in \{\text{What subsets of the real numbers}\}$?
17. (a) $3\sqrt{49} - 2\sqrt{25} \in \{\text{What subsets of the real numbers}\}$? (b) $3\sqrt[4]{81} + 2\sqrt{64} \in \{\text{What subsets of the real numbers}\}$?
18. The area of a base of a right pentagonal prism is 43 cm^2 and the length of a lateral edge is 17 cm. Find the volume of the right pentagonal prism.



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



20. Solve the system by substitution:
 $4x + y = 14$
 $2x - 7y = 22$

21. Solve the system by substitution:

$$x + 3y = -16$$

$$x - 5y = 16$$

22. Simplify. Write the answer with all positive exponents. $\frac{x^4 y^5 z^0 (x^5 y^0)^{-2} x y^{-2} (z^{-2})^3}{x^3 (y^{-1})^0 x y^3 x^{-1} (z^{-2})^{-1}}$

23. Simplify. Write the answer with all exponents positive. $\left(\frac{2x^{-3}p^2}{y^{-2}}\right)^{-3} \left(\frac{y^3p^5}{x^5}\right)^{-4}$

24. Use six unit multipliers to convert 36 cubic centimeters to cubic feet.

Add:

25. $\frac{3}{s+t} + \frac{3}{t}$

26. $\frac{5}{uv} - \frac{4}{u^2} + \frac{4}{u-v}$

27. The average of the first 6 weights was 28 pounds. The average of the next 9 weights was 33 pounds. What was the overall average of the weights?