

1. A contractor rents a storage room for tools. The room is 20 feet long, 10 feet wide, and 8 feet high. Find the storage capacity of the room in cubic feet.

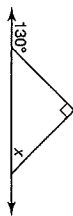
2. Although six of Simon's answers were incorrect, 85% of his answers did Simon answer in all?

3. The machine can produce 120 plastic dinosaurs in 8 minutes. How many can it produce in an hour?

4. Use a unit multiplier to convert 123 feet to yards. Show your work. (1 yd = 3 ft)

5. A square with vertices at (2, 2), (-1, 2), (-1, -1), and (2, -1) is dilated from the origin with a scale factor of 3. What are the coordinates of the vertices of the dilated square?

6. Find the measure of $\angle X$ in this figure.



7. Five houses in the neighborhood sold this month for the following prices.
\$328,000, \$297,500, \$415,000, \$389,000, \$345,000
The house with the highest selling price sold for how much more than the median selling price?

8. The diameter of a human hair might be 8.0×10^{-5} meters. Write that number in standard form.

9. For the function $y = x - 2$, make a table of ordered pairs and graph the function on a coordinate plane.

10. A bag contains 10 red, 20 white, and 30 blue marbles. If one marble is drawn from the bag, what is the probability that the marble is not red?

For questions 11 and 12, solve for x .

11. $\frac{12}{20} = \frac{x}{35}$

12. $3x + 1.8 = 6$

For questions 13–18, simplify the expression.

13. $\frac{4.8 \times 10^8}{3 \times 10^5}$

14. $(4 \times 10^9)(3 \times 10^9)$

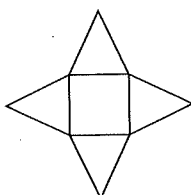
15. $2^3x^{-1}y^2x^3$

16. $1.2 - 0.12$
 $(0.12)(2)$

17. $5x^2 - 3x + x^2 - x$

18. $3x + 2(x - y)$

19. The figure shown is a net of a



- A. prism
B. cylinder
C. pyramid
D. cone

20. The diameter of the cylindrical barrel was 20 inches. When the barrel was lifted away, it left an imprint of a circle on the ground. What is the area of the circle?

1. Volume = $L \cdot W \cdot H$
 Volume = $20 \cdot 10 \cdot 8$
 Volume = 1600 ft^3

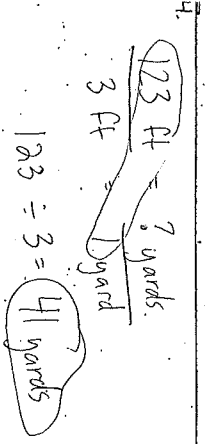
2.

Correct	85%
Incorrect	15%
Total	100%

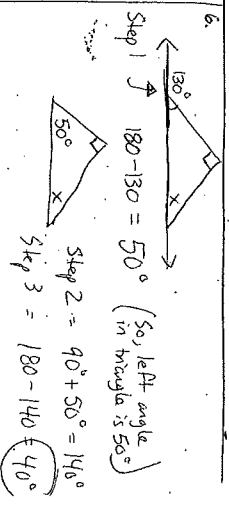
40 Questions

$\frac{6}{100} = \frac{15}{x}$
 $6 \cdot 100 = 15 \cdot x$
 $600 \div 15 = 40$

3. $120 \text{ dinosaurs} = ? \text{ dinosaurs}$
 8 minutes = 60 minutes
 $7200 \div 8 = 900 \text{ dinosaurs}$

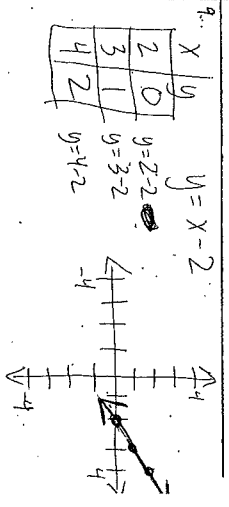


5. Scale factor of 3 means multiply everything by 3.
 $(2, 2) \rightarrow (6, 6)$
 $(-1, 2) \rightarrow (-3, 6)$
 $(-1, -1) \rightarrow (-3, -3)$



7. $247,000$, $328,000$, $345,000$, $389,000$, $415,000$
 Median = $345,000$
 Highest - median
 $415,000 - 345,000 = 70,000$

8. 8.0×10^{-5}
 -- move decimal 5 places to left!
 0.00008 m



10. 10 red, 20 white, 30 blue, 60 total
 Probability of not red = $\frac{50}{60} = \frac{5}{6}$

11. $\frac{12}{20} = \frac{x}{35}$
 $35 \cdot 12 = 20 \cdot x$
 $420 \div 20 = 21$

12. $3x + 10 = 6$
 $3x = -4$
 $x = -1.4$
 Step 1 - Subtract 10 from both sides
 Step 2 - Divide by 3.

13. $4.8 \times 10^8 = 1.6 \times 10^3$
 3×10^5
 -- Step 1 = Divide $4.8 \div 3 = 1.6$
 -- Step 2 = Subtract exponents on 10s.

14. $(4 \times 10^4)(3 \times 10^3)$
 -- Step 1 = Multiply $4 \cdot 3 = 12$
 -- Step 2 = Add exponents on 10s = 10^7
 $12 \times 10^7 = 1.2 \times 10^8$
 Too big, move decimal so its between 1 and 10.

15. $2^3 \cdot 3^0 \cdot 4^3 = \frac{2^3 \cdot 3^0}{2^1 \cdot 3^1} = \frac{8 \cdot 1}{3} = \frac{8}{3}$
 -- move negatives to bottom
 y^0 equals 1.
 -- subtract exponents.

16. $\frac{1.02 - 0.12}{(0.12)(2)} = \frac{1.08}{.24} = 4.5$
 solve top = 1.08
 solve bottom = .24
 Divide $1.08 \div .24$

17. $5x^2 - 3x + 1 = x^2 - 1$
 $4x^2 - 3x + 2 = 0$
 $6x^2 - 4x$
 Step 1 = combine x^2 's
 Step 2 = combine x 's

18. $3x + 2(x-y)$
 $3x + 2x - 2y = 5x - 2y$
 Step 1 = multiply 2 times x 's
 Step 2 = combine x 's

19. C. (Square Pyramid)

20. $A = \pi r^2$
 $A = 314 \text{ in}^2$
 $A = 314 \text{ in}^2$
 radius = 10 in