Answer questions 1-35 on your Scantron.
Questions 1-30 will be scored for the Power Bowl event. In the event of a tie, questions 31-35 will be used as the tiebreaker.

1. The least common multiple of 12, 18, and 30 is

a. 6 b. 60 c. 180 d. 540 e. 36

2. What percent of 44 is 55?

a. 125% b. 120% c. 80% d. 75% e. 11%

3. All of the following have 3 as a factor EXCEPT

a. 27 b. 57 c. 77 d. 87 e. 51

4. Every integer is

a. irrational b. real c. positive d. non-negative e. negative

5. 20% of 60 equals 30% of

a. 40 b. 50 c. 90 d. 100 e. NG

6. The smallest prime number greater than 90 is

a. 91 b. 93 c. 97 d. 95 e. NG

7. A 1 ft. x 3 in. x 4 in. rectangular block of ice melts at an average rate of 1 cubic inch per hour. How long does it take for the ice to be totally melted?

a. 8 hrs. b. 12 hrs. c. 144 hrs. d. 152 hrs. e. 84 hrs.

8. A car left from Uphere at 9:00 a.m. and arrived at Downthere, 340 km away, at 1:15 p.m. the same day. What would you need to do to find the average speed of the car in kilometers per 1 hour.

a. $\frac{340km}{7.75hr}$ **b.** $\frac{340km}{255hr}$ **c.** $\frac{340km}{415hr}$ **d.** $\frac{340km}{4.25hr}$ **e.** $\frac{4.25km}{340hr}$

9. In the SUBTRACTION problem below, the two ?'s represent missing digits. The SUM of these two missing digits is

$$\begin{array}{r} ?\,1\,? \\ -\,5\,6\,3 \\ \hline 3\,4\,7 \end{array}$$

a. 10 b. 9 c. 8 d. 7 e. 11

10. Express as a decimal: 50000 x .00005

a. 25 b. 2.5 c. 0.25 d. 0.025 e. 250

11. **When $\frac{8}{9}$ is divided by $\frac{4}{3}$, the result is**

a. $\frac{32}{27}$ **b.** $\frac{2}{3}$ **c.** $\frac{2}{27}$ **d. 6** **e.** $\frac{12}{27}$

12. **At the rate of $15.00 for the first 10 words of a newspaper advertisement and $1.25 for each additional word, the cost of a 15-word advertisement is**

a. $16.25 **b. $21.00** **c. $20.50** **d. $21.25** **e. $20.00**

13. **Solve.** $\left(6\times10^{4}\right)+\left(5\times10^{2}\right)+\left(3\times10^{1}\right)=$

a. 653 **b. 6,053** **c. 356** **d. 65,030** **e. NG**

14. **The symbol 5! represents the product of the first 5 positive whole numbers. The value of 5! + 5 is**

a. 10 **b. 25** **c. 29** **d. 125** **e. 120**

15. **In 30 years, Sue will be 1 ½ times as old as she is now. How old is she now?**

a. 15 **b. 20** **c. 45** **d. 60** **e. 30**

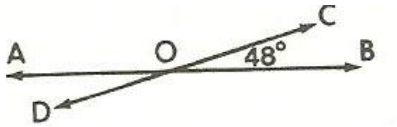
16. **Al calls every 3 days, Lee every 4 days, and Pat every 6 days. Once in every _?_ days, all three will call on the same day.**

a. 9 **b. 12** **c. 13** **d. 15** **e. 18**

17. **If $a < 10$ and $b < 5$, it MUST be true that**

a. $a > b$ **b.** $a - b = 5$ **c.** $a = 2b$ **d.** $a + b < 20$ **e.** $a = b$

18. **In the straight-line drawing, find the measure of angle AOC.**



a. 48º **b. 132º** **c. 142º** **d. 312º** **e. 42º**

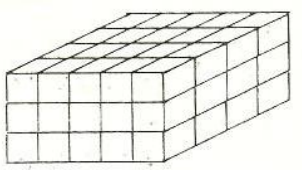
19. **The Hulk is 3 cm taller than Batman and 4 cm shorter than Superman. If Superman's height is 2 meters, then Batman's height is**

a. 200 cm **b. 196 cm** **c. 197 cm** **d. 193 cm** **e. 195 cm**

20. **Joan bought a painting for $10, sold it for $20, repurchased it for $30, then resold it for $40. Joan**

a. broke even **b. made $20** **c. lost $10** **d. lost $20** **e. made $100**

21. **How many of the small cubical blocks were needed to construct the rectangular solid pictured?**

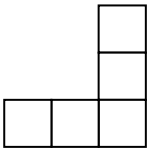


a. 45 **b. 47** **c. 48** **d. 60** **e. 94**

22. **Find the prime factorization for 665.**

a. $5 \cdot 9 \cdot 17$ **b.** $5 \cdot 3 \cdot 19$ **c.** $5 \cdot 13 \cdot 17$ **d.** $5 \cdot 7 \cdot 19$ **e.** $5 \cdot 7 \cdot 13$

23. **The figure below consists of five squares of the same size. The area of the figure is 180. The perimeter of the figure is**



a. 36 **b. 45** **c. 72** **d. 120** **e. NG**

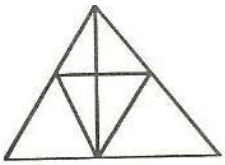
24. **Solve.** $2.8 - \frac{c}{4} \geq 7.4$

a. $c \leq 11.2$ **b.** $c \geq 29.6$ **c.** $c \leq -18.4$ **d.** $c \leq -29.6$ **e.** $c \geq 18.4$

25. **Express the quotient as a number in scientific notation:** $\frac{1.96 \times 10^9}{.07 \times 10^4}$

a. $28 \cdot 10^5$ **b.** $2.8 \cdot 10^5$ **c.** $2.8 \cdot 10^6$ **d.** $28 \cdot 10^6$ **e.** $2.8 \cdot 10^{13}$

26. How many different triangles are in the diagram?



a. 7 **b. 10** **c. 13** **d. 11** **e. 15**

27. Four times a number is twelve less than six times the same number. What is the number?

a. 4 **b. -6** **c. 6** **d. -4** **e. 5**

28. Which of these lines has an x-intercept of 4 and a y-intercept of 3?

a. $y = \frac{3}{4}x + 3$ **b.** $y = \frac{4}{3}x + 4$ **c.** $y = -\frac{3}{4}x + 3$

d. $y = -\frac{4}{3}x + 4$ **e.** $\frac{3}{4}x + 4$

29. **Which is a simplified expression for $5 + 2(x - 5)$?**

a. $2x$ **b.** $2x + 5$ **c.** $2x - 5$ **d.** $7x - 35$ **e.** $2x - 10$

30. **Simplify:** $(a^3b^6)^6$

a. a^9b^{12} **b.** $a^{12}b^{24}$ **c.** $a^{18}b^{36}$ **d.** $a^{12}b^9$ **e.** $a^{36}b^{18}$

31. **The next number in the sequence 1, 3, 7, 13, 21, . . . is**

a. 37 **b.** 35 **c.** 33 **d.** 31 **e.** 32

32. **Solve.** $6 = \frac{1}{5}(12s - 6)$

a. $s = 2$ **b.** $s = \frac{2}{5}$ **c.** $s = 3$ **d.** $s = 1$ **e.** $s = \frac{12}{5}$

33. Multiply $(3t-7)(3t+7)$

a. $6t^2 = 49$ **b. $9t^2 + 42t - 49$**

c. $9t^2 - 42t + 49$ **d. $9t^2 - 49$** **e. $6t^2 - 49$**

34. Simplify the expression: $\frac{2^5 \cdot 3^3 \cdot 5^4}{2^8 \cdot 3^2 \cdot 5^4} =$

a. $\frac{2^3}{3^1}$ **b. $\frac{3}{8}$** **c. $\frac{1}{2}$** **d. 24** **e. $\frac{1}{24}$**

35. In a class of 30 students, exactly 7 have cell phones, exactly 15 have iPods, and 2 of those students have both an iPod and a cell phone. How many of the 30 students have neither an iPod nor a cell phone?

a. 10 **b. 8** **c. 6** **d. 4** **e. 2**