Basic Math Pre-Test

Name: _____

Are you ready for Pre-Algebra?

Put your answers in the boxes.

1. Find the **Square Root.** $\sqrt{49} =$ ☐

2. Find the **Square Root.** $\sqrt{121} =$ ☐

3. Find the **"Lowest Common Multiple"** of 3 and 7. ☐

4. Find the **"Greatest Common Factor"** of 18 and 24. ☐

5. Is 12 a **"Prime"** Number? ☐

6. Prime Factor 18. ☐

7. What are the **"Divisibility Rules"** for each of the following numbers

   2 _____

   3 _____

   5 _____

   10 _____

8. In 3^2, what is the "Exponent"? ☐
   What is the "Base"? ☐

9. Find the value of 2^3. ☐

10. Write 7 x 7 x 7 x 7 in exponent form. ☐

11. What is the Value of 8^0? ☐

12. Circle the numbers which are **"Perfect Squares"**:

    9 12 16 24 36 79 81

13. Simplify:

    (a) $\frac{18}{9} =$ ☐ (b) $\frac{24}{27} =$ ☐

    (c) $\frac{49}{48} =$ ☐ (d) $\frac{28}{6} =$ ☐

14. Convert to an Improper Fraction: $1\frac{5}{6}$ ☐

Perform the operations (Q15 - Q29)

15. $\frac{1}{5} + \frac{5}{6}$ ☐

16. $\frac{5}{8} - \frac{5}{12}$ ☐

17. $1\frac{1}{4} + 2\frac{1}{5}$ ☐

18. $4 - \frac{1}{7}$ ☐

19. $\frac{8}{9} \times \frac{27}{32}$ ☐

20 $1\frac{1}{4} \times \frac{16}{5}$ ☐

21 $6 \div \frac{1}{3}$ ☐

22 $\frac{22}{7} \div \frac{1}{21}$ ☐

23 $1\frac{1}{4} \div \frac{16}{24}$ ☐

24 2.57 + 18.03 ☐

25 18.03 - 2.57 ☐

26 4 x 5.02 ☐

27 4.5 x 10.02 ☐

28 Round your answer to two decimal places.
8 ÷ 4.02 ☐

29 Convert each fraction to a decimal:
Use the bar for repeating decimals.

(a) $\frac{1}{4}$ = ☐

(b) $\frac{2}{5}$ = ☐

(c) $\frac{1}{8}$ = ☐

(d) $1\frac{1}{2}$ = ☐

(e) $\frac{1}{3}$ = ☐

30 Convert each answer in problem 29 to a percent:

(a) ☐ (d) ☐

(b) ☐ (e) ☐

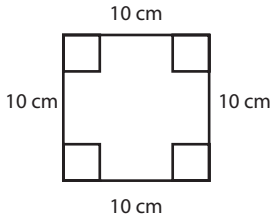
(c) ☐

31 Find 50% of 300. ☐

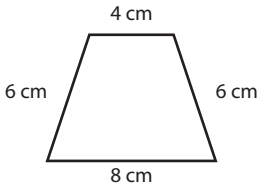
32 Find $33\frac{1}{3}$ % of 600. ☐

33 Find 150% of 4. ☐

34 Name each quadrilateral as a trapezoid, a square, or a rectangle.
(Write its most specific name.)



(a) _____



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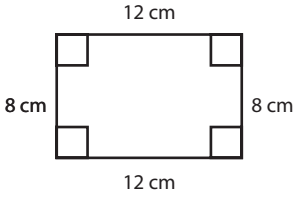
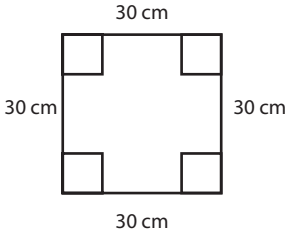
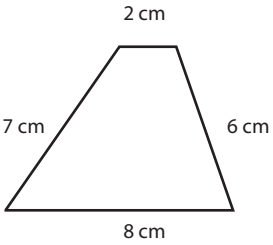


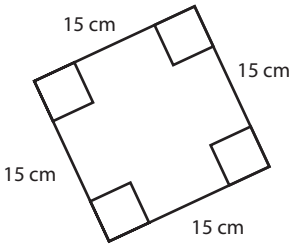
(c) _____



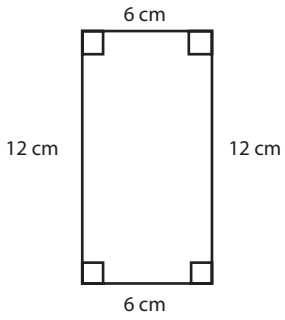
(d) _____



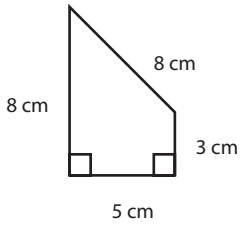
(e) _____



(f) _____



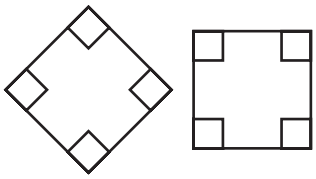
(g) _____



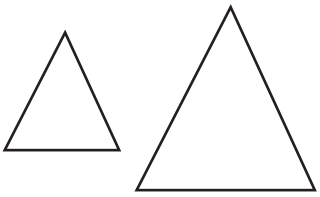
(h) _____

35 Do these polygons appear to be congruent or similar or neither? (Write C, S, or N.)

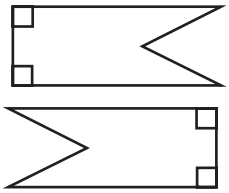
(a) _____



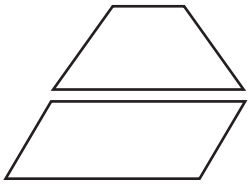
(b) _____



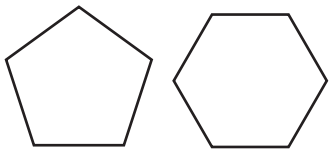
(c) _____



(d) _____



(e) _____



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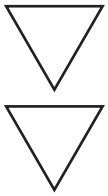
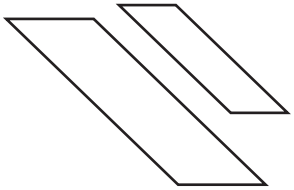
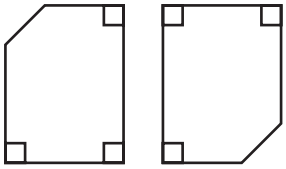


(g) _____



(h) _____



(i) _____

Are you ready for Pre-Algebra? (Answers)

1. 7

2. 11

3. 21

4. 6

5. No, it is composite.

6. $18 = 2 \times 3 \times 3$

7. 2 Last Digit Even
   3 Sum of Digits Divisible by 3
   5 Last Digit is 5 or 0
   10 Last digit is 0

8. Exponent is 2 Base is 3

9. 8

10. 7^4

11. 1

12. (9) 12 (16) 24 (36) 79 (81)

13. (a) 2 (b) $\frac{8}{9}$ (c) $1\frac{1}{48}$ (d) $4\frac{2}{3}$

14. $\frac{11}{6}$

15. $\frac{6}{30} + \frac{25}{30} = 1\frac{1}{30}$

16. $\frac{15}{24} - \frac{10}{24} = \frac{5}{24}$

17. $\frac{5}{4} + \frac{11}{5} = \frac{25}{20} + \frac{44}{20} = \frac{69}{20} = 3\frac{9}{20}$

18. $\frac{28}{7} - \frac{1}{7} = \frac{27}{7} = 3\frac{6}{7}$

19. $\frac{\cancel{8}^{1}}{\cancel{9}_{1}} \times \frac{\cancel{27}^{3}}{\cancel{32}_{4}} = \frac{3}{4}$

20. $\frac{\cancel{5}^{1}}{\cancel{4}_{1}} \times \frac{\cancel{16}^{4}}{\cancel{5}_{1}} = 4$

21. 18

22. 66

23. $1\frac{7}{8}$

24. 20.60 or 20.6

25.
$$\begin{array}{r} {}^{7}\cancel{1}8.{}^{9}0{}^{1}3 \\ -\ 2.57 \\ \hline 15.46 \end{array}$$

26. 20.08

27. 45.09

28. 1.99

29. (a) 0.25
(b) 0.4
(c) 0.125
(d) 1.5
(e) $0.\overline{3}$

30. (a) 25%
(b) 40%
(c) 12.5%
(d) 150%
(e) $33\frac{1}{3}\%$ or $33.\overline{3}\%$

31. 150

32. 200

33. 6

34. (a) square (b) trapezoid (c) rectangle
(d) square (e) trapezoid (f) square
(g) rectangle (h) trapezoid

35. (a) C (b) C (c) S
(d) C (e) N (f) N
(g) C (h) S (i) C