Math Review
DCA Review #1

Name Key

1. Angels Falls is approximately 900 meters tall. Write an expression that shows the height of Angel Falls in exponential form.

(power)

$9 = 3^2$

$00 = 10^2$ ∞ 30

900
/\
30·30 = 30^2

2. The distance across Nebraska is approximately 8^3 miles. How many miles is that?

8 · 8 · 8 = 512 miles

364
× 8
512

3. The distance from New York City to Sydney, Australia is 10^4 miles - how many miles is that?

- Power of tens trick
- exponent tells you how many zeros

10,000 miles

4. Use order of operations to evaluate the expression. What is the solution? 5 • 3 + 8 • 2

Go inside
Use the power
Multiply points - Divide + Conquer
Add to ours - subtract from theirs
Do this left to right....

15 + 16 = 31

5. One of these students used the correct order of operations to evaluate the expression. Which student is correct?

Chris: 9 + 27 ÷ 3 = 12 No
Dan: 45 ÷ (3 + 6) • 3 = 15 Yes
Sue: 4^2 + 48 ÷ (10 - 4) = 7 No

Chris
9 + 27 ÷ 3
9 + 9 = 18

Dan
45 ÷ (3+6) · 3
45 ÷ 9 · 3
5 · 3 = 15

Sue
16 + 48 ÷ 6
16 + 8 = 24

Dan is correct

6. Evaluate the expression: 4•(32 ÷ 4) - 3^2. Which operation should be done first?

Division inside parenthesis

4 · 8 - 9
32 - 9 = 23

7. Write the expression for the table. Show your work

N	??
30	92
60	182
90	272

gets larger : could be addition or multiplication
1st one adds 62, others don't - can't be addition

92 is about 3 times larger than 30

60 · 3 = 180 need 2 more
90 · 3 = 270 need 2 more
30 · 3 = 90 need 2 more

3N + 2

8. What is the value of the expression if x = 10? for $6x \div 4$

$(6 \cdot 10) \div 4$

$60 \div 4 = 15$

9. What is the value of the expression if w = 55? for $w \div 5$

$55 \div 5 = 11$

10. What is the most reasonable estimate for this equation? $39 + 43 + 44 = n$

$40 + 40 + 45 = 125$

or $40 + 40 + 40 = 120$

John = 7 + B

11. John is 12 years old. He is 7 years older than his brother. Write the equation that would be used to find the age of John's brother (b)?

$12 = 7 + B$

12. What number solves the equation? $48 = n + 12$

$-12 \quad -12$

$36 = n$

13. What is the most reasonable estimate for this equation? $9.9 + 5.2 + 6.325 + 3.56 = a$

$10 + 5 + 6 + 4 = 25$

14. There are 12 people waiting in line for a movie. Seven of them had purchased tickets online. What equation would be used to find how many people (p) still need to buy tickets?

total: $12 = 7 + p$

7: have tickets; p: need tickets

15. What solves the equation? $148 = j - 14$

$+14 \quad +14$

$162 = j$

16. What solves the equation? $4t = \$72$

$\frac{4t}{4} = \frac{\$72}{4}$

$4\overline{)72}$ → 18, -4, 32

$t = \$18$

17. A college student paid $125 for 5 books. Write an equation that shows how to find the average (each) cost of one book (b)?

\# of books   total

$5 \cdot \quad = 125$

18. Solve: 7g = $85.75

$$\frac{7g}{7} = \frac{\$85.75}{7}$$

$$7\overline{)85.75} = 12.25$$

g = $12.25

19. 48 **is** a number (n) divided by 4. Write the equation.

$48 = n \div 4$

20. Six friends shared a box of candy. Each friend received 5 pieces of candy. There were no pieces left over. Write an equation that shows how to find the number pieces of candy (n) in the box?

$B \div 6 = 5$

or

$B \div 5 = 6$

21. What solves the equation? 6 = m ÷ 8

$\cdot 8 \quad \cdot 8$

$48 = m$

22. Write the expression shows: five and two tenths + four and three hundredths

$5.2 + 4.03$

23. Write the equation shows the difference between the total rainfall in March and April and the total rainfall in May and June?

March-April   May-June

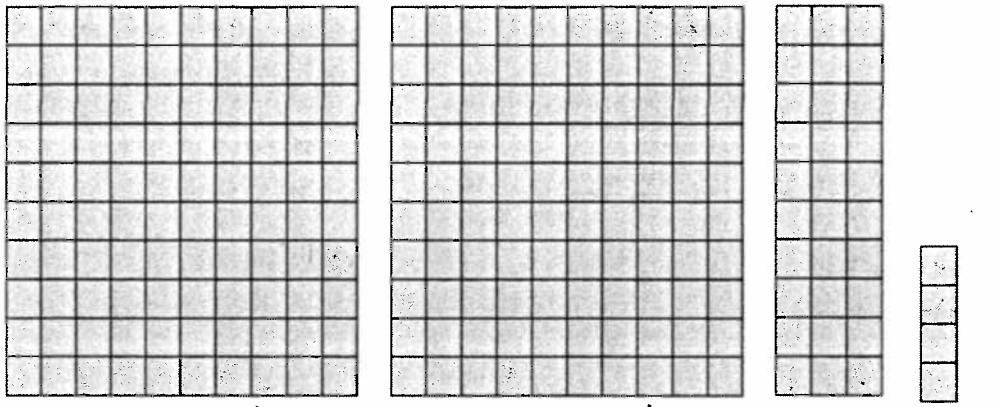
$(6.5 + 12.75) - (8.62 - 4.89$

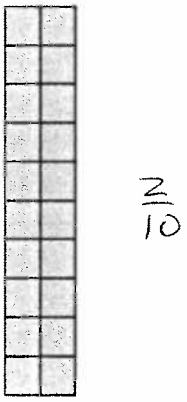
Month	Total Rainfall in inches
March	6.5
April	12.75
May	8.62
June	4.89

24. Write 6.832 - 3.16 in word form?

six and eight hundred thirty two thousandths
subtract
three and sixteen hundredths

25. Write the addition problem this decimal model illustrates:





$$\begin{array}{r} 2.34 \\ +\ 0.2 \\ \hline 2.54 \end{array}$$

Answer 2.54