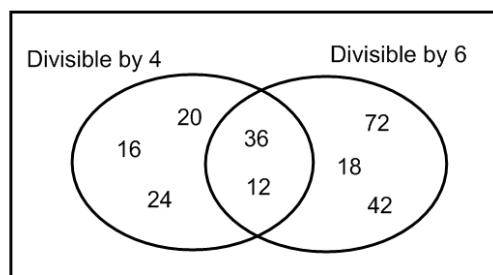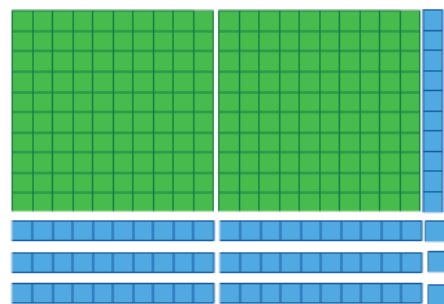### Grade 7 Math Practice Midterm

1.   Which number is divisible by both 6 and 9?

   a.   115   b. 342   c. 513   d. 615

2.   What is the correct estimate of 3.1 + 4.8 if you are using *front-end* estimation?
   a.   7   b. 7.8   c. 8   d. 8.7

3.   Which two numbers are in the wrong location in the Venn Diagram?
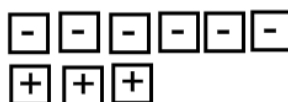
   a.   12 and 36
   b.   24 and 72
   c.   16 and 18
   d.   20 and 42

4.   A large party pizza has 24 slices. How many friends would you invite to *join* you, if you wanted to share *two* large pizzas equally?

   a.   7   b. 8   c. 9   d. 1

5.   Which fraction is equal to 0.25?

   a. $\frac{1}{4}$ b. $\frac{2}{4}$ c. $\frac{25}{10}$ d. $\frac{25}{99}$

6.   Which multiplication equation is represented by the diagram?

   a.   1.1 x 2.3 = 2.53
   b.   2.3 x 1.1 = 2.53
   c.   1.3 x 2.1 = 2.37
   d.   2.1 x 1.3 = 2.73

7.   Which sum does this set of tiles model?

   a. (-6) + (+3)= -9
   b. (-6) + (+3) = -3
   c. (-6) + (+3) = +3
   d. (-6) + (+3) = +9

8.   Which fraction would fit between $\frac{3}{4}$ and 1?

   a. $\frac{2}{5}$ b. $\frac{3}{5}$ c. $\frac{4}{5}$ d. $\frac{6}{5}$

9.   What is the best estimate for the circumference of a circle with a radius of 6 cm?

   a.   6   b. 18   c. 27   d. 36

10.   Which relation produces the data in the table?

   a.   2x
   b.   2x + 3
   c.   3x – 2
   d.   4x – 4

Term #	1	2	3	4	5
Term	1	4	7	10	13

11.   At the year-end soccer party, each player received two hotdogs and there were 4 hotdogs left over. What an algebraic expression that would represent the total number of hotdogs at the party?

   a.   p + 2   b. 2p + 2   c. 2p + 4   d. 4p + 2

12.   What expression represents the phrase, "six less than double a number?"
   a. $\frac{n}{2} - 6$ b. 2n – 6   c. 6 – 2n   d. 6n – 2

13.   What is the value of 4k + 7 when k = 4?
   a.   15   b. 23   c. 37   d. 51

14.   Lex earns $2 for *each* box of catalogues he delivers and gets another $12 for delivering flyers. If he receives a total of $36 for his pay, which equation allows you to determine how many boxes he delivered?
   a.   2B + 12 = 36   c. 12B + 2 = 36
   b.   b. 2B – 36 = 12   d. 12B – 36 = 2

15.   Which ordered list represents the output values for the table below?
   a.   0, 1, 2, 3
   b.   4, 9, 14, 19
   c.   5, 4, 3, 2
   d.   5, 10, 15, 20

Input	Output
n	5n - 1
1	
2	
3	
4	

16.   A pack of pencils cost $1.99. Sales tax is 13%. How much tax is added to the cost of the pencils?
   a. $0.13   b. $0.26   c. $0.39   d. $0.93

17. What is the solution to 4.2 x 3.0 + 4.2 ÷ 2.1?
    a. 8   b. 14.6   c. 16.8   d. 18

18. If the radius of a circle is 4cm, what is the diameter?
    a. 1.27 cm   b. 2 cm   c. 8 cm   d. 12.56 cm

19. What is the circumference of a circle that has diameter 10cm?
    a. 15.7 cm   b. 31.4 cm   c. 78.5 cm   d. 314

20. What would be a correct estimate for the area of a circle with diameter 8m?
    a. 12 m²   b. 24 m²   c. 48 m²   d. 192 m²

21. What is the area of the given parallelogram?
    a. 5 cm²
    b. 32 cm²
    c. 40 cm²
    d. 120 cm²
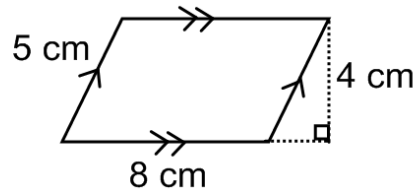
22. If a circle has a circumference of 20 cm, what is its area?

    a. 6.4 cm   b. 10 cm   c. 12 cm   d. 32 cm

23. What is the area of the circle with diameter 22cm?

    a. 34.54 cm²   b. 69.08 cm²   c. 379.94 cm²   d. 1519.76 cm²

24. If a parallelogram has an area of 64 cm² and height 4 cm, what is its length?

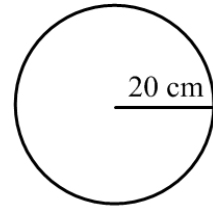   a. 16 cm   b. 68 cm   c. 136 cm   d. 256 cm

25. What is the area of the following triangle?

    a. 7.5 cm²
   b. 12 cm²
    c. 18 cm²
    d. 24 cm²
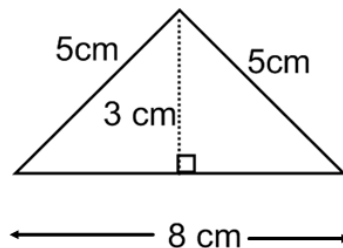
Constructed Response. Answer all questions in the space provided.

1.   Bobby buys a pizza with a radius of 20 cm. If he cuts it into 8 equal pieces, what is the area of each slice?

20 cm

2.   A dog is leashed on a chain that is 10 m long connected to a peg in the ground. The owner wants to build a circular fence around the dog that has a radius 1 m longer than the leash.

A. What is the length of the fence?

10 m
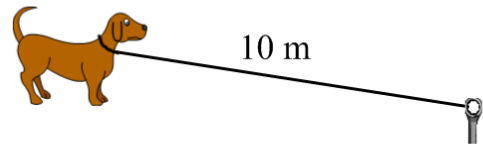
B. What is the area of grass between the fence and the end of the leash?

3.   Sketch algebra tiles to solve each equation.

A) $x + 4 = 12$ B) $3m + 2 = 11$

4.   Marcus bought 4 CDs for $6 each and sold 5 CDs for $5 each.

    A) Write an equation to find Marcus' overall earnings or losses.

    B) Solve the equation. State your final answer.

5.   Sam took $120 to the mall to buy hair products. She wants to purchase shampoo for $7, hair spray for $12, styling products for $25, and a curling iron for $45. Sales tax is 13%.

    Does Sam have enough money to buy all the hair products? Support your answer with workings.

6.   Evaluate:

    A. $(-2) - (-5)$ (model)   B. $(-3) + (-7)$ (model)

    C. $5 - 12$ D. $(-3) - (-4) + (-5)$

7.   Evaluate:

A. 1.2×3.2 (model)   B. $5.4 \div 0.9$

C. $4.5 - 2.37$ D. $3.1 + 0.8 + 4.25$

8.   Evaluate: $3.2 + 1.4 \times 0.2 - 2.1 \div 0.7$

9.   Place in the correct order: $3.1, 3.01, 3.\overline{1}, 3\frac{1}{4}$

10.   Of the 450 students in Grade 7 and 8, 45% like the colour purple. How many like purple?

11.   Johnny had 16 out of 23 marks on his Math test. What percent did he get?