Snow Day Packet 1 Name: _____ Date: _____

1. **Of the following expressions, which is equal to $6(\sqrt{10})$?**

   A. 36
   B. $\sqrt{(600)}$
   C. $\sqrt{(360)}$
   D. $\sqrt{(6)}$
   E. $10\sqrt{(6)}$

2. **A box of laundry detergent contains 16.5 oz of product. What is the maximum number of loads that can be washed if each load requires a minimum of $^3/_4$ oz of detergent?**

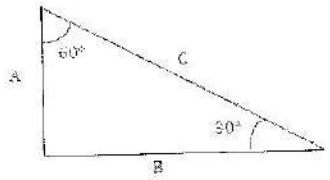
   A. 10 loads
   B. 22 loads
   C. 50 loads
   D. 18 loads
   E. 16.5 loads

3. **There are n musicians in a marching band. All play either a drum or a brass instrument. If p represents the fraction of musicians playing drums, how many play a brass instrument?**

   A. $P(n - 1)$
   B. $pn - 1$
   C. $(p - 1)n$
   D. $(1 - p)n$
   E. $(p + 1)n$

4. **Given the triangle shown in the figure, what is the length of the side A?**

   A. C/2
   B. B/2
   C. (B + C)/2
   D. 2B
   E. 2C



5. **Which of the following can be divided by 3, with no remainder?**

   A. 2018
   B. 46
   C. 8912
   D. 555
   E. 739

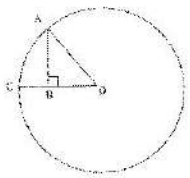
6. **A bullet travels at 5×10^6 feet per hour. If it strikes its target in 2×10^{-4} hours, how far has it traveled?**

   A. 200 feet
   B. 25 feet
   C. 1000 feet
   D. 50 feet
   E. 100 feet

7. **If the two lines $2x + y = 0$ and $y = 3$ are plotted on a typical xy coordinate grid, at which point will they intersect?**
   A. -1.5, 3
   B. -1.5, 0
   C. 1.5, 3
   D. 4, 1
   E. 4.5, 1

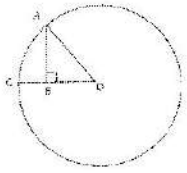
8. **Which of the following equations describes a line that is parallel to the x-axis?**
   A. $y = -3x$
   B. $y = 3$
   C. $y = 2x$
   D. $(x + y) = 0$
   E. None of these answer choices

9. **If the length of segment AB = x, and the length of segment OB = y, which of the following expressions describes the radius of the circle?**



   A. $\sqrt{(x^2 + 1)}$
   B. $x + y$
   C. $x^2 + y^2$
   D. $y + 4$
   E. $\sqrt{(x^2 + y^2)}$

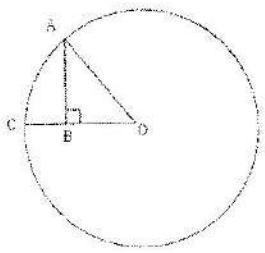
10. **If the length of segment AB equals that of segment OB, what is the ∠AOC?**
   A. Same as ∠ABO
   B. 45 degrees
   C. Same as ∠BAO
   D. All are true.
   E. "*45 degrees*" and "*Same as ∠BAO*" are true, but not "*Same as ∠ABO*"



1. C	2. B	3. D	4. A	5. D
6. C	7. A	8. B	9. E	10. E

Snow Day Packet 2 Name: _____ **Date:** _____

1. **Which of the following must be true?**
   A. OB = BC
   B. OA = OC
   C. OB = OC
   D. None of these
   E. AB = OC



2. **A blouse normally sells for $138, but is on sale for 25% off. What is the cost of the blouse?**
   A. $34.50
   B. $125
   C. $67
   D. $113
   E. $103.50

3. **Which number is equivalent to 2^{-3}?**
   A. 1/8
   B. ½
   C. ¼
   D. 1/16
   E. 1/12

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   B. (0, -1)
   C. (2, 9)
   D. (0, 0)
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5. **A crane raises one end of a 3300 lb steel beam. The other end rests upon the ground. If the crane supports 30% of the beam's weight, how many pounds does it support?**
   A. 2310 lbs
   B. 990 lbs
   C. 1100 lbs
   D. 330 lbs
   E. 700 lbs

6. **If Lynn can type a page in p minutes, what piece of the page can she do in 5 minutes?**
   A. 5/p
   B. p - 5
   C. p + 5
   D. p/5
   E. 1- p + 5

7. **If Sally can paint a house in 4 hours, and John can paint the same house in 6 hour, how long will it take for both of them to paint the house together?**
   A. 2 hours and 24 minutes
   B. 3 hours and 12 minutes
   C. 3 hours and 44 minutes
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8. **Employees of a discount appliance store receive an additional 20% off of the lowest price on an item. If an employee purchases a dishwasher during a 15% off sale, how much will he pay if the dishwasher originally cost $450?**
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9. **The sales price of a car is $12,590, which is 20% off the original price. What is the original price?**
   A. $14,310.40
   B. $14,990.90
   C. $15,290.70
   D. $15,737.50
   E. $16,935.80

10. **Solve the following equation for *A* : 2A/3 = 8 + 4A**
   A. -2.4
   B. 2.4
   C. 1.3
   D. -1.3
   E. 0

1. B	2. E	3. A	4. C	5. B
6. A	7. A	8. D	9. D	10. A

Snow Day Packet 3 Name: _____ **Date:** _____

1. **If Leah is 6 years older than Sue, and John is 5 years older than Leah, and the total of their ages is 41. Then how old is Sue?**
   A. 8
   B. 10
   C. 14
   D. 19
   E. 21

2. **Alfred wants to invest $4,000 at 6% simple interest rate for 5 years. How much interest will he receive?**
   A. $240
   B. $480
   C. $720
   D. $960
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3. **Jim is able to sell a hand-carved statue for $670 which was a 35% profit over his cost. How much did the statue originally cost him?**
   A. $496.30
   B. $512.40
   C. $555.40
   D. $574.90
   E. $588.20

4. **The city council has decided to add a 0.3% tax on motel and hotel rooms. If a traveler spends the night in a motel room that costs $55 before taxes, how much will the city receive in taxes from him?**
   A. 10 cents
   B. 11 cents
   C. 15 cents
   D. 17 cents
   E. 21 cents

5. **A student receives his grade report from a local community college, but the GPA is smudged. He took the following classes: a 2 hour credit art, a 3 hour credit history, a 4 hour credit science course, a 3 hour credit mathematics course, and a 1 hour science lab. He received a "B" in the art class, an "A" in the history class, a "C" in the science class, a "B" in the mathematics class, and an "A" in the science lab. What was his GPA if the letter grades are based on a 4 point scale? (A=4, B=3, C=2, D=1, F=0)**
   A. 2.7
   B. 2.8
   C. 3.0
   D. 3.1
   E. 3.2

6. **Simon arrived at work at 8:15 A.M. and left work at 10: 30 P.M. If Simon gets paid by the hour at a rate of $10 and time and ½ for any hours worked over 8 in a day. How much did Simon get paid?**

A. $120.25
B. $160.75
C. $173.75
D. $180
E. $182.50

7. **Grace has 16 jellybeans in her pocket. She has 8 red ones, 4 green ones, and 4 blue ones. What is the minimum number of jellybeans she must take out of her pocket to ensure that she has one of each color?**

A. 4
B. 8
C. 12
D. 13
E. 16

8. **If r = 5 z then 15 z = 3 y, then r =**

A. y
B. 2 y
C. 5 y
D. 10 y
E. 15 y

9. **If 300 jellybeans cost you x dollars. How many jellybeans can you purchase for 50 cents at the same rate?**

A. 150/x
B. 150x
C. 6x
D. 1500/x
E. 600x

10. **Lee worked 22 hours this week and made $132. If she works 15 hours next week at the same pay rate, how much will she make?**

A. $57
B. $90
C. $104
D. $112
E. $122

1. A	2. E	3. A	4. D	5. C
6. C	7. D	8. A	9. A	10. B

Snow Day Packet 4 Name: _____ **Date:** _____

1. **If $8x + 5x + 2x + 4x = 114$, the $5x + 3 =$**
   A. 12
   B. 25
   C. 33
   D. 47
   E. 86

2. **You need to purchase a textbook for nursing school. The book cost $80.00, and the sales tax where you are purchasing the book is 8.25%. You have $100. How much change will you receive back?**
   A. $5.20
   B. $7.35
   C. $13.40
   D. $19.95
   E. $21.25

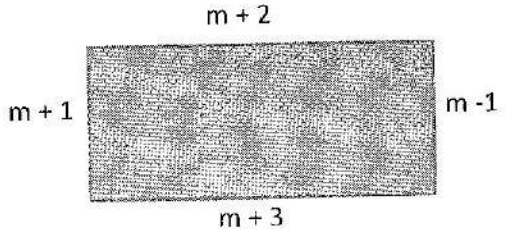
3. **You purchase a car making a down payment of $3,000 and 6 monthly payments of $225. How much have you paid so far for the car?**
   A. $3225
   B. $4350
   C. $5375
   D. $6550
   E. $6398

4. **Your supervisor instructs you to purchase 240 pens and 6 staplers for the nurse's station. Pens are purchased in sets of 6 for $2.35 per pack. Staplers are sold in sets of 2 for 12.95. How much will purchasing these products cost?**
   A. $132.85
   B. $145.75
   C. $162.90
   D. $225.25
   E. $226.75

5. **If $y = 3$, then $y^3(y^3-y)=$**
   A. 300
   B. 459
   C. 648
   D. 999
   E. 1099

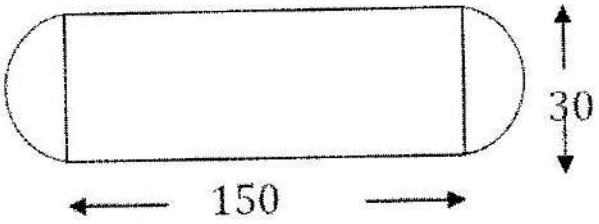
6. **The figure shows an irregular quadrilateral and the lengths of its individual sides. Which of the following equations best represents the perimeter of the quadrilateral?**

   A. $2m^4 + 5$
   B. $m^4 + 5$
   C. $4m^2 + 5$
   D. $4m + 5$
   E. $5m + 5$



7. **The diagram to the right shows the outline of a racetrack for skaters, which consists of two long straight sections and two semi-circular turns. Given the dimensions shown, which of the following most closely measures the perimeter of the entire track?**

A. 300 yards
B. 425 yards
C. 180 yards
D. 360 yards
E. 395 yards



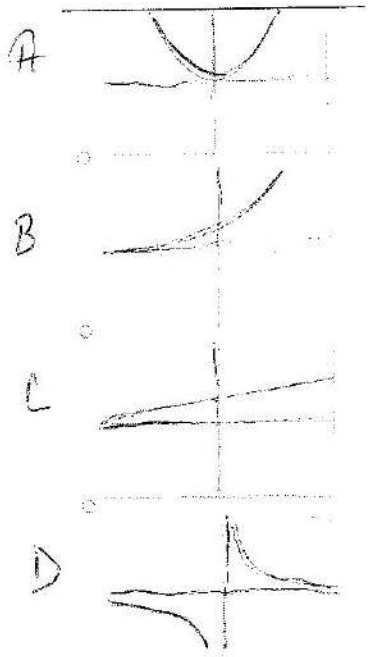
8. **A motorcycle manufacturer offers 3 different models, each available in 6 different colors. How many different combinations of model and color are available?**

A. 12
B. 9
C. 6
D. 18
E. 24

9. **If $x + y > 0$ when $x > y$, which of the following cannot be true?**

A. $x = 3$ and $y = 0$
B. $x = 6$ and $y = -1$
C. $x = -3$ and $y = 0$
D. $x = -4$ and $y = -3$
E. $x = 3$ and $y = -3$

10. **Which of the following could be a graph of the function $y = 1/x$?**



1. C	2. E	3. D	4. E	5. C
6. D	7. A	8. B	9. E	10. D

Snow Day Packet 5 Name: _____ Date: _____

1. **This question is based on the table below. The table shows the cost of renting a bicycle for 1, 2 or 3 hours. Which of the following equations best represents the data, if C represents the cost and h represents the time of the rental?**

Hours	1	2	3
Cost	$3.60	$7.20	$10.80

A. $C = 3.60h + 10.80$
B. $C = 3.60 + 7.20h$
C. $C = 3.60h$
D. $C = h + 3.60$
E. $C = 10.80/h$

2. **Which of the following statements is true?**

A. Perpendicular lines have opposite reciprocal slopes
B. Perpendicular lines have reciprocal slopes
C. Perpendicular lines have slopes that are unrelated
D. Perpendicular lines have opposite slopes
E. Perpendicular lines have the same slopes

3. **There are 64 squares on a checkerboard. Bobby puts one penny on the first square, two on the second square, four on the third, eight on the fourth, and continues to double the number of coins at each square until he has covered all 64 squares. How many coins must he place upon the last square?**

A. 2^{64}
B. $2^{64} - 1$
C. $2^{63} + 1$
D. $2^{64} - 2$
E. 2^{63}

4. **Carrie wants to decorate her party with bundles of balloons containing three balloons each. Balloons are available in 4 different colors. There must be three different colors in each bundle. How many different kinds of bundles can she make?**

A. 10
B. 18
C. 12
D. 6
E. 4

5. **Rafael has a business selling computers. He buys computers from the manufacturer for $450 each and sells them for $800. Each month, he must also pay fixed costs of $3000 for rent and utilities at his store. If he sells n computers in a month, which of the following equations can be used to calculate his profit?**

A. $P = n(800 - 450)$
B. $P = n(800 - 450) - 3000$
C. $P = n(800 - 450) + 3000$
D. $P = n(800 - 450 - 3000)$
E. $P = 3000n(800 - 450)$

6. Arrange the following numbers in order from the least to greatest 2^3, 4^2, 6°, 9, 10^1.

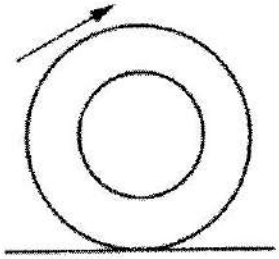
A. $6^\circ, 9, 10^1, 2^3, 4^2$
B. $9, 6^\circ, 10^1, 4^2, 2^3$
C. $2^3, 4^2, 6^\circ, 9, 10^1$
D. $6^\circ, 2^3, 9, 10^1, 4^2$
E. $10^1, 2^3, 6^\circ, 9, 4^2$

7. Dorothy is half her sister's age. She will be three fourths of her sister's age in 20 years. How many years old is she?

A. 10
B. 15
C. 30
D. 20
E. 25

8. ***This question is based on the diagram below.*** **A tire on a car rotates at 500 RPM (revolutions per minute) when the car is traveling at 50 km/hr (kilometers per hour). What is the circumference of the tire, in meters?**

A. $50{,}000/60 \times 2\pi$
B. $50{,}000/2\pi$
C. $50{,}000/60$
D. $50{,}000/500 \times 2\pi$
E. $10/6$



9. **Which of the following expressions is equivalent to $(a + b)(a - b)$?**

A. $ab(a + b)$
B. $(a - b)^2$
C. $a^2 - b^2$
D. $ab(a - b)$
E. $(a + b)^2$

10. **Which of the following expressions represents the ratio of the area of a circle to its circumference?**

A. $r/2$
B. πr^2
C. $\pi r^2/2\pi$
D. $2\pi r/r^2$
E. $2\pi r^{1/2}$

1. C	2. A	3. E	4. E	5. B
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Snow Day Packet 1 Name: _____ **Date:** _____

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   B. $\sqrt{(600)}$
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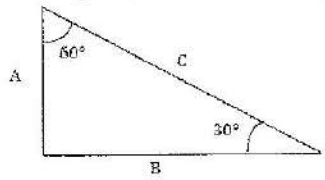

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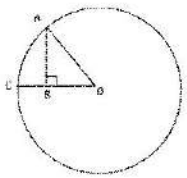

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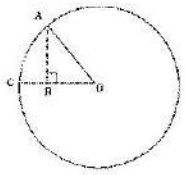

1. C	2. B	3. D	4. A	5. D
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Snow Day Packet 2 Name: _____ **Date:** _____

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   C. OB = OC
   D. None of these
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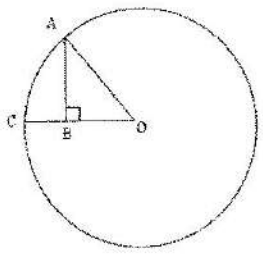

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   C. 1.3
   D. -1.3
   E. 0

1.B	2.E	3.A	4.C	5.B
6.A	7.A	8.D	9.D	10.A

Snow Day Packet 3 Name: _____ **Date:** _____

1. **If Leah is 6 years older than Sue, and John is 5 years older than Leah, and the total of their ages is 41. Then how old is Sue?**
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   B. 10
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   D. 17 cents
   E. 21 cents

5. **A student receives his grade report from a local community college, but the GPA is smudged. He took the following classes: a 2 hour credit art, a 3 hour credit history, a 4 hour credit science course, a 3 hour credit mathematics course, and a 1 hour science lab. He received a "B" in the art class, an "A" in the history class, a "C" in the science class, a "B" in the mathematics class, and an "A" in the science lab. What was his GPA if the letter grades are based on a 4 point scale? (A=4, B=3, C=2, D=1, F=0)**
   A. 2.7
   B. 2.8
   C. 3.0
   D. 3.1
   E. 3.2

6. **Simon arrived at work at 8:15 A.M. and left work at 10: 30 P.M. If Simon gets paid by the hour at a rate of $10 and time and ½ for any hours worked over 8 in a day. How much did Simon get paid?**

A. $120.25
B. $160.75
C. $173.75
D. $180
E. $182.50

7. **Grace has 16 jellybeans in her pocket. She has 8 red ones, 4 green ones, and 4 blue ones. What is the minimum number of jellybeans she must take out of her pocket to ensure that she has one of each color?**

A. 4
B. 8
C. 12
D. 13
E. 16

8. **If r = 5 z then 15 z = 3 y, then r =**

A. y
B. 2 y
C. 5 y
D. 10 y
E. 15 y

9. **If 300 jellybeans cost you x dollars. How many jellybeans can you purchase for 50 cents at the same rate?**

A. 150/x
B. 150x
C. 6x
D. 1500/x
E. 600x

10. **Lee worked 22 hours this week and made $132. If she works 15 hours next week at the same pay rate, how much will she make?**

A. $57
B. $90
C. $104
D. $112
E. $122

1. A	2. E	3. A	4. D	5. C
6. C	7. D	8. A	9. A	10. B

Snow Day Packet 4 Name: _____ **Date:** _____

1. **If $8x + 5x + 2x + 4x = 114$, the $5x + 3 =$**
   A. 12
   B. 25
   C. 33
   D. 47
   E. 86

2. **You need to purchase a textbook for nursing school. The book cost $80.00, and the sales tax where you are purchasing the book is 8.25%. You have $100. How much change will you receive back?**
   A. $5.20
   B. $7.35
   C. $13.40
   D. $19.95
   E. $21.25

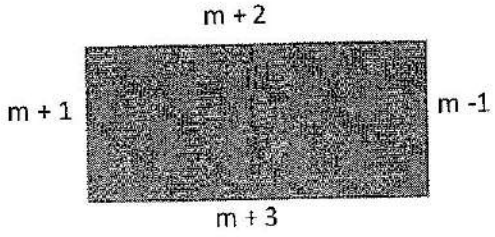
3. **You purchase a car making a down payment of $3,000 and 6 monthly payments of $225. How much have you paid so far for the car?**
   A. $3225
   B. $4350
   C. $5375
   D. $6550
   E. $6398

4. **Your supervisor instructs you to purchase 240 pens and 6 staplers for the nurse's station. Pens are purchased in sets of 6 for $2.35 per pack. Staplers are sold in sets of 2 for 12.95. How much will purchasing these products cost?**
   A. $132.85
   B. $145.75
   C. $162.90
   D. $225.25
   E. $226.75

5. **If $y = 3$, then $y^3(y^3-y)=$**
   A. 300
   B. 459
   C. 648
   D. 999
   E. 1099

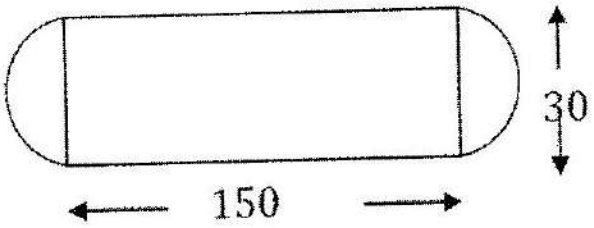
6. **The figure shows an irregular quadrilateral and the lengths of its individual sides. Which of the following equations best represents the perimeter of the quadrilateral?**

   A. $2m^4 + 5$
   B. $m^4 + 5$
   C. $4m^2 + 5$
   D. $4m + 5$
   E. $5m + 5$



7. **The diagram to the right shows the outline of a racetrack for skaters, which consists of two long straight sections and two semi-circular turns. Given the dimensions shown, which of the following most closely measures the perimeter of the entire track?**

A. 300 yards
B. 425 yards
C. 180 yards
D. 360 yards
E. 395 yards



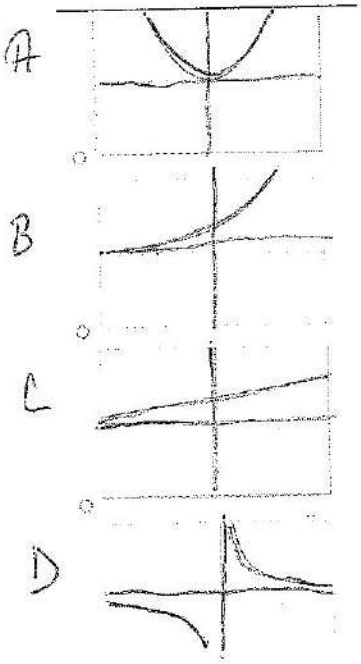
8. **A motorcycle manufacturer offers 3 different models, each available in 6 different colors. How many different combinations of model and color are available?**

A. 12
B. 9
C. 6
D. 18
E. 24

9. **If $x + y > 0$ when $x > y$, which of the following cannot be true?**

A. x = 3 and y = 0
B. x = 6 and y = -1
C. x = -3 and y = 0
D. x = -4 and y = -3
E. x = 3 and y = -3

10. **Which of the following could be a graph of the function $y = 1/x$?**



1. C	2. E	3. D	4. E	5. C
6. D	7. A	8. B	9. E	10. D

Snow Day Packet 5 Name: _____ **Date:** _____

1. **This question is based on the table below. The table shows the cost of renting a bicycle for 1, 2 or 3 hours. Which of the following equations best represents the data, if C represents the cost and h represents the time of the rental?**

Hours	1	2	3
Cost	$3.60	$7.20	$10.80

A. $C = 3.60h + 10.80$
B. $C = 3.60 + 7.20h$
C. $C = 3.60h$
D. $C = h + 3.60$
E. $C = 10.80/h$

2. **Which of the following statements is true?**

A. Perpendicular lines have opposite reciprocal slopes
B. Perpendicular lines have reciprocal slopes
C. Perpendicular lines have slopes that are unrelated
D. Perpendicular lines have opposite slopes
E. Perpendicular lines have the same slopes

3. **There are 64 squares on a checkerboard. Bobby puts one penny on the first square, two on the second square, four on the third, eight on the fourth, and continues to double the number of coins at each square until he has covered all 64 squares. How many coins must he place upon the last square?**

A. 2^{64}
B. $2^{64} - 1$
C. $2^{63} + 1$
D. $2^{64} - 2$
E. 2^{63}

4. **Carrie wants to decorate her party with bundles of balloons containing three balloons each. Balloons are available in 4 different colors. There must be three different colors in each bundle. How many different kinds of bundles can she make?**

A. 10
B. 18
C. 12
D. 6
E. 4

5. **Rafael has a business selling computers. He buys computers from the manufacturer for $450 each and sells them for $800. Each month, he must also pay fixed costs of $3000 for rent and utilities at his store. If he sells *n* computers in a month, which of the following equations can be used to calculate his profit?**

A. $P = n(800 - 450)$
B. $P = n(800 - 450) - 3000$
C. $P = n(800 - 450) + 3000$
D. $P = n(800 - 450 - 3000)$
E. $P = 3000n(800 - 450)$

6. Arrange the following numbers in order from the least to greatest 2^3, 4^2, 6°, 9, 10^1.

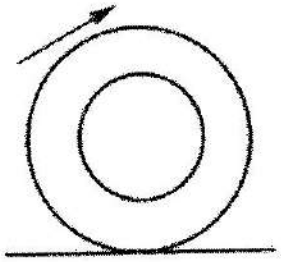
A. $6^\circ, 9, 10^1, 2^3, 4^2$
B. $9, 6^\circ, 10^1, 4^2, 2^3$
C. $2^3, 4^2, 6^\circ, 9, 10^1$
D. $6^\circ, 2^3, 9, 10^1, 4^2$
E. $10^1, 2^3, 6^\circ, 9, 4^2$

7. Dorothy is half her sister's age. She will be three fourths of her sister's age in 20 years. How many years old is she?

A. 10
B. 15
C. 30
D. 20
E. 25

8. *This question is based on the diagram below.* **A tire on a car rotates at 500 RPM (revolutions per minute) when the car is traveling at 50 km/hr (kilometers per hour). What is the circumference of the tire, in meters?**

A. $50{,}000/60 \times 2\pi$
B. $50{,}000/2\pi$
C. $50{,}000/60$
D. $50{,}000/500 \times 2\pi$
E. $10/6$



9. **Which of the following expressions is equivalent to $(a + b)(a - b)$?**

A. $ab(a + b)$
B. $(a - b)^2$
C. $a^2 - b^2$
D. $ab(a - b)$
E. $(a + b)^2$

10. **Which of the following expressions represents the ratio of the area of a circle to its circumference?**

A. $r/2$
B. πr^2
C. $\pi r^2/2\pi$
D. $2\pi r/r^2$
E. $2\pi r^{1/2}$

1. C	2. A	3. E	4. E	5. B
6. D	7. C	8. E	9. C	10. A