**Test Name: 2nd 9 Weeks Study Guide**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1)** **Which of the following statements is NOT true?** |

|  |  |
| --- | --- |
|  **A**  | 2 + 5 = 5 + 2 |

|  |  |
| --- | --- |
|  **B**  | 2 (5 + 1) = (2 **∙** 5) + (2 **∙** 1) |

|  |  |
| --- | --- |
|  **C**  | 2 + (5 + 1) = (2 + 5) + 1 |

|  |  |
| --- | --- |
|  **D**  | (2 + 5) + 1 = 2 (5 + 1) |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **2)** **3 ∙ 5 = 5 ∙ 3 is an example of which property?** |

|  |  |
| --- | --- |
|  **F**  | Identity Property of Multiplication |

|  |  |
| --- | --- |
|  **G**  | Commutative Property of Multiplication |

|  |  |
| --- | --- |
|  **H**  | Associative Property of Multiplication |

|  |  |
| --- | --- |
|  **J**  | Distributive Property |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **3)** **Which choice correctly completes this sentence?** **7(*m* + 6)= \_\_\_\_ + 7(6)** |

|  |  |
| --- | --- |
|  **A**  | *m* |

|  |  |
| --- | --- |
|  **B**  | 7*m* |

|  |  |
| --- | --- |
|  **C**  | *m* + 6 |

|  |  |
| --- | --- |
|  **D**  | 42 |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **4)** **Determine which statement is *false*.** |

|  |  |
| --- | --- |
|  **F**  | For all integers a and b, a + b = b + a is the commutative property of addition. |

|  |  |
| --- | --- |
|  **G**  | For all integers a, b, and c, (a + b) + c = a + (b + c) is the associative property of addition. |

|  |  |
| --- | --- |
|  **H**  | For all integers a, b, and c, a(b + c) = (a + b) x (a + c) is the distributive property. |

|  |  |
| --- | --- |
|  **J**  | For all integers a, a + 0 = a is the identity property of addition. |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **5)** **65 (1) = 65  is an example of what property?** |

|  |  |
| --- | --- |
|  **A**  | Associative Property of Multiplication |

|  |  |
| --- | --- |
|  **B**  | Identity Property of Multiplication |

|  |  |
| --- | --- |
|  **C**  | Commutative Property of Multiplication |

|  |  |
| --- | --- |
|  **D**  | Distributive Property |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **6)** **Which equation is an example of the multiplicative inverse property?** |

|  |  |
| --- | --- |
|  **F**  | 7 x 0 = 0 |

|  |  |
| --- | --- |
|  **G**  | 7 x 1 = 7 |

|  |  |
| --- | --- |
|  **H**  | 7 x (-1) = -7 |

|  |  |
| --- | --- |
|  **J**  | 7 x C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-6-0.gif = 1 |

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|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **7)** **What fraction and decimal have the same value as 10-2 ?** |

|  |  |
| --- | --- |
|  **A**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-7-0.gif; 0.1 |

|  |  |
| --- | --- |
|  **B**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-7-1.gif; 0.01 |

|  |  |
| --- | --- |
|  **C**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-7-2.gif; 0.02 |

|  |  |
| --- | --- |
|  **D**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-7-3.gif; 0.001 |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **8)** **What decimal has the same value as 10-4 ?** |

|  |  |
| --- | --- |
|  **F**  | –0.0001 |

|  |  |
| --- | --- |
|  **G**  | –0.00001 |

|  |  |
| --- | --- |
|  **H**  | 0.0001 |

|  |  |
| --- | --- |
|  **J**  | 0.00001 |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **9)** **What is the common difference in this sequence?**  **4, 8, 12, 16, 20, …** |

|  |  |
| --- | --- |
|  **A**  | 2 |

|  |  |
| --- | --- |
|  **B**  | 4 |

|  |  |
| --- | --- |
|  **C**  | 6 |

|  |  |
| --- | --- |
|  **D**  | 24 |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **10)** **Which variable expression can be used to find the next term in this sequence?** **25, 50, 75, 100, …** |

|  |  |
| --- | --- |
|  **F**  | 2*n* |

|  |  |
| --- | --- |
|  **G**  | *n* + 25 |

|  |  |
| --- | --- |
|  **H**  | 125*n* |

|  |  |
| --- | --- |
|  **J**  | *n* - 25 |

 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **11)** **What is the common ratio in this sequence?** **500, 100, 20, 4, 0.8, …** |

|  |  |
| --- | --- |
|  **A**  | 5 |

|  |  |
| --- | --- |
|  **B**  | 5*n* |

|  |  |
| --- | --- |
|  **C**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-11-0.gif |

|  |  |
| --- | --- |
|  **D**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-11-1.gif*n* |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **12)** **Which of the following sequences can be described by the rule *n* - 6?** |

|  |  |
| --- | --- |
|  **F**  | 50, 46, 42, 38, … |

|  |  |
| --- | --- |
|  **G**  | 80, 74, 70, 68, … |

|  |  |
| --- | --- |
|  **H**  | 36, 30, 24, 18, … |

|  |  |
| --- | --- |
|  **J**  | 100, 94, 880, 74, … |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **13)** **John wants to leave a 15% tip for his meal.  If the meal costs $24.40, how much is the bill including the tip?** |

|  |  |
| --- | --- |
|  **A**  | $26.84 |

|  |  |
| --- | --- |
|  **B**  | $28.06 |

|  |  |
| --- | --- |
|  **C**  | $29.28 |

|  |  |
| --- | --- |
|  **D**  | $29.40 |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **14)** **Thornton’s Department Store has a 30%-off sale this week.  What is the sale price for a pair of $24.00 jeans?** |

|  |  |
| --- | --- |
|  **F**  | $2.40 |

|  |  |
| --- | --- |
|  **G**  | $7.20 |

|  |  |
| --- | --- |
|  **H**  | $16.80 |

|  |  |
| --- | --- |
|  **J**  | $21.60 |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **15)** **Pete bought a coat worth $100, but applied a 20% off coupon. Dakota bought a $150 coat, but used a 50% off coupon. Based on this information, which of the following is true?** |

|  |  |
| --- | --- |
|  **A**  | Dakota paid the same amount as Pete. |

|  |  |
| --- | --- |
|  **B**  | Pete paid $5 less than Dakota. |

|  |  |
| --- | --- |
|  **C**  | Dakota paid $50 more than Pete. |

|  |  |
| --- | --- |
|  **D**  | Dakota paid $5 less than Pete. |

 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **16)** **After exercising, Kim’s heart rate was 20 beats in 6 seconds.  What is Kim’s heart rate per minute?** |

|  |  |
| --- | --- |
|  **F**  | 40 beats per minute |

|  |  |
| --- | --- |
|  **G**  | 65 beats per minute |

|  |  |
| --- | --- |
|  **H**  | 180 beats per minute |

|  |  |
| --- | --- |
|  **J**  | 200 beats per minute |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **17)** **The ratio of a drawing to an object is 12 cm : 45 cm.  If the length of the drawing is 36 cm, what is the actual length of the object?** |

|  |  |
| --- | --- |
|  **A**  | 9.6 cm |

|  |  |
| --- | --- |
|  **B**  | 63 cm |

|  |  |
| --- | --- |
|  **C**  | 135 cm |

|  |  |
| --- | --- |
|  **D**  | 150 cm |

 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **18)** **One table is 2 ft. by 5 ft. Another table is 3 ft. by 7 ft.  Are the two tables proportional?**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
|  |  |

|  |
| --- |
|               7 ft. 3 ft. |

  |
|  |

|  |
| --- |
|         5 ft.2 ft.  |

  |  |
|  |  |  |

 |

|  |  |
| --- | --- |
|  **F**  | no, because C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-18-0.gif |

|  |  |
| --- | --- |
|  **G**  | yes, because C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-18-1.gif |

|  |  |
| --- | --- |
|  **H**  | no, because C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-18-2.gif |

|  |  |
| --- | --- |
|  **J**  | yes, because C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-18-3.gif |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **19)** **Alana is 61 inches tall and at 10:00 a.m. her shadow is 29 inches.  If the shadow of the tree next to her is 76 inches, about how tall is the tree?** |

|  |  |
| --- | --- |
|  **A**  | 13 feet |

|  |  |
| --- | --- |
|  **B**  | 15 feet |

|  |  |
| --- | --- |
|  **C**  | 16 feet |

|  |  |
| --- | --- |
|  **D**  | 36 feet |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **20)** **Amy had several books. The ratio of length to width of each of the books was 7 cm to 4 cm. Which of the ratios could NOT be the dimensions of one of Amy's books?** |

|  |  |
| --- | --- |
|  **F**  | 14 cm by 12 cm |

|  |  |
| --- | --- |
|  **G**  | 21 cm by 12 cm |

|  |  |
| --- | --- |
|  **H**  | 35 cm by 20 cm |

|  |  |
| --- | --- |
|  **J**  | 49 cm by 28 cm |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **21)** **It took Bradley C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-21-0.gif hour to read 50 pages. If he continues to read at the same rate, how long should it take Bradley to read 150 pages?** |

|  |  |
| --- | --- |
|  **A**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-21-1.gif hour |

|  |  |
| --- | --- |
|  **B**  | 1C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-21-2.gif hours |

|  |  |
| --- | --- |
|  **C**  | 2C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-21-3.gif hours |

|  |  |
| --- | --- |
|  **D**  | 4C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-21-4.gif hours |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **22)** **Michael is purchasing a jacket that costs $60.00. If the sales tax is 5%, how much tax will Michael pay?** |

|  |  |
| --- | --- |
|  **F**  | $3.00 |

|  |  |
| --- | --- |
|  **G**  | $4.00 |

|  |  |
| --- | --- |
|  **H**  | $5.00 |

|  |  |
| --- | --- |
|  **J**  | $6.00 |

 |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **23)** **Ellie constructed a prism is that is 50 cm in length, 40 cm in width and 30 cm high.**

|  |
| --- |
|  |
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      **If she reduces the height of the prism from 30 cm to** **20 cm, how will the surface area change?** |

|  |  |
| --- | --- |
|  **A**  | The surface area will be 1,400 cm2 less. |

|  |  |
| --- | --- |
|  **B**  | The surface area will be 1,600 cm2 less. |

|  |  |
| --- | --- |
|  **C**  | The surface area will be 1,800 cm2 less. |

|  |  |
| --- | --- |
|  **D**  | The surface area will be 2,000 cm2 less. |

 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **24)** **A construction worker needs to fill up an old chimney with cement.  He needs to know exactly how much cement will fit inside.  Find the volume of the chimney.**

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| --- |
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 |

|  |  |
| --- | --- |
|  **F**  | 297 cu. ft. |

|  |  |
| --- | --- |
|  **G**  | 369 cu. ft. |

|  |  |
| --- | --- |
|  **H**  | 960 cu. ft. |

|  |  |
| --- | --- |
|  **J**  | 978 cu. ft. |

 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **25)** **A rectangular prism has a length of 6 centimeters, a width of 3 centimeters, and a height of 4 centimeters.**

|  |
| --- |
|  |
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     **If the smallest length is increased by 9 cm, what will be true of the volume of the new prism?** |

|  |  |
| --- | --- |
|  **A**  | The volume will be 3 times greater. |

|  |  |
| --- | --- |
|  **B**  | The volume will be 4 times greater. |

|  |  |
| --- | --- |
|  **C**  | The volume will be 8 times greater. |

|  |  |
| --- | --- |
|  **D**  | The volume will be 10 times greater. |

 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **26)** **Find the volume of this cylinder.**

|  |
| --- |
|  |
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 |

|  |  |
| --- | --- |
|  **F**  | about 18.84 cu. in. |

|  |  |
| --- | --- |
|  **G**  | about 37.68 cu. in. |

|  |  |
| --- | --- |
|  **H**  | about 74.97 cu. in. |

|  |  |
| --- | --- |
|  **J**  | about 150.8 cu. in. |

 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **27)** **What is the surface area of this rectangular solid?**

|  |
| --- |
|  |
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 |

|  |  |
| --- | --- |
|  **A**  | 27 m2 |

|  |  |
| --- | --- |
|  **B**  | 54 m2 |

|  |  |
| --- | --- |
|  **C**  | 72 m2 |

|  |  |
| --- | --- |
|  **D**  | 174 m2 |

 |

**Use the figures below to answer this question.**

|  |
| --- |
|  |
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 **Rectangle ABCD is similar to rectangle FLOP.**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **28)** **Which line segment corresponds to** C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-28-0.gif**?** |

|  |  |
| --- | --- |
|  **F**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-28-1.gif |

|  |  |
| --- | --- |
|  **G**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-28-2.gif |

|  |  |
| --- | --- |
|  **H**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-28-3.gif |

|  |  |
| --- | --- |
|  **J**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-28-4.gif |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **29)** **If figure A is similar to figure B, then what is the value of *x*?**

|  |
| --- |
|  |
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 |

|  |  |
| --- | --- |
|  **A**  | 1 inch |

|  |  |
| --- | --- |
|  **B**  | 9 inches |

|  |  |
| --- | --- |
|  **C**  | 11 inches |

|  |  |
| --- | --- |
|  **D**  | 18 inches |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **30)** **Which pair of shapes is similar?** |

|  |  |
| --- | --- |
|  **F**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-30-0.gif |

|  |  |
| --- | --- |
|  **G**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-30-1.gif |

|  |  |
| --- | --- |
|  **H**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-30-2.gif |

|  |  |
| --- | --- |
|  **J**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-30-3.gif |

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|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **31)** **Which proportion correctly represents the relationship between the two similar figures?**

|  |
| --- |
|  |
|  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-31-0.gif |

 |

|  |  |
| --- | --- |
|  **A**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-31-1.gif= C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-31-2.gif |

|  |  |
| --- | --- |
|  **B**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-31-3.gif= C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-31-4.gif |

|  |  |
| --- | --- |
|  **C**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-31-5.gif= C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-31-6.gif |

|  |  |
| --- | --- |
|  **D**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-31-7.gif= C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-31-8.gif |

 |

**Use this figure of two similar triangles to answer this question.**

|  |
| --- |
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|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **32)** **Finish the proportion between these corresponding triangles for: C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-32-0.gif = ?** |

|  |  |
| --- | --- |
|  **F**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-32-1.gif |

|  |  |
| --- | --- |
|  **G**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-32-2.gif |

|  |  |
| --- | --- |
|  **H**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-32-3.gif |

|  |  |
| --- | --- |
|  **J**  | 8 **∙** 12 |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **33)** **What is the value of *x* in the diagram shown below?** C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-33-0.jpg |

|  |  |
| --- | --- |
|  **A**  | 2C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-33-1.gif |

|  |  |
| --- | --- |
|  **B**  | 5 |

|  |  |
| --- | --- |
|  **C**  | 7C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-33-2.gif |

|  |  |
| --- | --- |
|  **D**  | 9 |

 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **34)** **Philip drew this figure on the board.**

|  |
| --- |
|  |
|  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-34-0.gif |

       **If Philip’s teacher asks him to draw a figure similar to this one, what could he draw?** |

|  |  |
| --- | --- |
|  **F**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-34-1.gif |

|  |  |
| --- | --- |
|  **G**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-34-2.gif |

|  |  |
| --- | --- |
|  **H**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-34-3.gif |

|  |  |
| --- | --- |
|  **J**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-34-4.gif |

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|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **35)** **These two triangles are similar.**

|  |
| --- |
|  |
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             **What would be a correct similarity statement when comparing these two triangles?** |

|  |  |
| --- | --- |
|  **A**  | ΔUTV ~ ΔDEF |

|  |  |
| --- | --- |
|  **B**  | ΔDEF ~ ΔVTU |

|  |  |
| --- | --- |
|  **C**  | ΔTUV ~ ΔDFE |

|  |  |
| --- | --- |
|  **D**  | ΔEFD ~ ΔTUV |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **36)** **Which of the following CANNOT be classified as a parallelogram?** |

|  |  |
| --- | --- |
|  **F**  | rhombus |

|  |  |
| --- | --- |
|  **G**  | rectangle |

|  |  |
| --- | --- |
|  **H**  | square |

|  |  |
| --- | --- |
|  **J**  | trapezoid |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **37)** **Which statement is false?** |

|  |  |
| --- | --- |
|  **A**  | A trapezoid has only one pair of parallel sides. |

|  |  |
| --- | --- |
|  **B**  | A rectangle is always a square. |

|  |  |
| --- | --- |
|  **C**  | A parallelogram is always a quadrilateral. |

|  |  |
| --- | --- |
|  **D**  | A square is always a rhombus. |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **38)** **Which of the following quadrilaterals always have 90-degree angles?** |

|  |  |
| --- | --- |
|  **F**  | square and parallelogram |

|  |  |
| --- | --- |
|  **G**  | square and trapezoid |

|  |  |
| --- | --- |
|  **H**  | square and rectangle |

|  |  |
| --- | --- |
|  **J**  | square and rhombus |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **39)** **Which of these statements is FALSE?** |

|  |  |
| --- | --- |
|  **A**  | A parallelogram is a quadrilateral with opposite sides congruent and parallel. |

|  |  |
| --- | --- |
|  **B**  | A rectangle is a square and a polygon. |

|  |  |
| --- | --- |
|  **C**  | A rectangle is a parallelogram with only right angles. |

|  |  |
| --- | --- |
|  **D**  | A square is a rhombus. |

 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **40)** **What is true about figure ABCD?**

|  |
| --- |
|  |
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 |

|  |  |
| --- | --- |
|  **F**  | Figure ABCD has exactly one pair of parallel sides. |

|  |  |
| --- | --- |
|  **G**  | Figure ABCD has four right angles. |

|  |  |
| --- | --- |
|  **H**  | Figure ABCD has two pairs of congruent sides. |

|  |  |
| --- | --- |
|  **J**  | Figure ABCD is a parallelogram. |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **41)** **Name the 4-sided figure with two sets of parallel sides.** |

|  |  |
| --- | --- |
|  **A**  | trapezoid |

|  |  |
| --- | --- |
|  **B**  | quadrilateral |

|  |  |
| --- | --- |
|  **C**  | hexagon |

|  |  |
| --- | --- |
|  **D**  | parallelogram |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **42)** **Choose the answer that correctly identifies *only the true******statements* from the following list.**     I.                  A parallelogram is a quadrilateral with opposite sides congruent and parallel.     II.                 A rectangle is a square and a polygon.     III.                A rectangle is a parallelogram with four right angles.     IV.              A square is a rhombus.     V.               A trapezoid has three parallel sides. |

|  |  |
| --- | --- |
|  **F**  | I, II |

|  |  |
| --- | --- |
|  **G**  | III, V |

|  |  |
| --- | --- |
|  **H**  | I, II, III |

|  |  |
| --- | --- |
|  **J**  | I, III, IV |

 |

**Use this diagram to answer this question.**

|  |
| --- |
|  |
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|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **43)** **If the triangle is rotated 180 degrees clockwise about the origin, what are the coordinates of G?** |

|  |  |
| --- | --- |
|  **A**  | (1, 1) |

|  |  |
| --- | --- |
|  **B**  | (-1, 1) |

|  |  |
| --- | --- |
|  **C**  | (-1, -1) |

|  |  |
| --- | --- |
|  **D**  | (1, -1) |

 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **44)** **The vertices of triangle EFG are (2, -1), (4, -2), and (1, -3). What would be the triangle’s coordinates after it is translated 3 left and 4 up?**

|  |
| --- |
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 |

|  |  |
| --- | --- |
|  **F**  | (-1, 3) (1, 2) (-2, 1) |

|  |  |
| --- | --- |
|  **G**  | (-2, 2) (0, 1) (-5, 0) |

|  |  |
| --- | --- |
|  **H**  | (-1, 2) (1, 2) (-2, -1) |

|  |  |
| --- | --- |
|  **J**  | (0, 4) (2, 1) (-3, -1) |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **45)** **Point A of triangle ABC is at (4, 2). If ABC is reflected about the *x*-axis, what are the new coordinates of A?** |

|  |  |
| --- | --- |
|  **A**  | (4, 2) |

|  |  |
| --- | --- |
|  **B**  | (-4, -2) |

|  |  |
| --- | --- |
|  **C**  | (-4, 2) |

|  |  |
| --- | --- |
|  **D**  | (4, -2) |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **46)** **Point D of triangle DEF is at (3, 1). If DEF is reflected about the *y*-axis, what are the new coordinates of D?** |

|  |  |
| --- | --- |
|  **F**  | (3, 1) |

|  |  |
| --- | --- |
|  **G**  | (3, -1) |

|  |  |
| --- | --- |
|  **H**  | (-3, 1) |

|  |  |
| --- | --- |
|  **J**  | (-3, -1) |

 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **47)** **In the graph, what transformation has been used to move triangle ABC?**

|  |
| --- |
|  |
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 |

|  |  |
| --- | --- |
|  **A**  | a slide |

|  |  |
| --- | --- |
|  **B**  | a reflection over the *x*-axis |

|  |  |
| --- | --- |
|  **C**  | a reflection over the *y*-axis |

|  |  |
| --- | --- |
|  **D**  | a rotation of 90º |

 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **48)** **Rectangle ABCD is plotted on the coordinate plane below.**

|  |
| --- |
|  |
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               **If rectangle ABCD is translated to left 6 units and up 5 units, what will be the coordinates of Point B’?** |

|  |  |
| --- | --- |
|  **F**  | (0, 3) |

|  |  |
| --- | --- |
|  **G**  | (1, 3) |

|  |  |
| --- | --- |
|  **H**  | (1, 8) |

|  |  |
| --- | --- |
|  **J**  | (3, 0) |

 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **49)** **Triangle ABC is graphed below.**

|  |
| --- |
|  |
|  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-49-0.gif |

             **If triangle ABC is rotated 90° clockwise about the origin, what will be the coordinates of C’?** |

|  |  |
| --- | --- |
|  **A**  | (-1, 6) |

|  |  |
| --- | --- |
|  **B**  | (-2, 6) |

|  |  |
| --- | --- |
|  **C**  | (1, -6) |

|  |  |
| --- | --- |
|  **D**  | (2, -6) |

 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **50)** **A right triangle is graphed below.**

|  |
| --- |
|  |
|  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-50-0.gif |

              **What will be the coordinates of Point D’ if triangle DEF is dilated by a scale factor of 2?** |

|  |  |
| --- | --- |
|  **F**  | (2, 6) |

|  |  |
| --- | --- |
|  **G**  | (2, 8) |

|  |  |
| --- | --- |
|  **H**  | (0, 8) |

|  |  |
| --- | --- |
|  **J**  | (0, 6) |

 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **51)** **A rectangle is formed by plotting these points on a coordinate plane:****(2, 2), (2, 4), (6, 2) and (6, 4).**

|  |
| --- |
|  |
|  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-51-0.gif |

         **If a new rectangle is created by applying a scale factor of C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-51-1.gif to these coordinates, what will be the coordinates of the new rectangle?** |

|  |  |
| --- | --- |
|  **A**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-51-2.gif |

|  |  |
| --- | --- |
|  **B**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-51-3.gif |

|  |  |
| --- | --- |
|  **C**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-51-4.gif |

|  |  |
| --- | --- |
|  **D**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-51-5.gif |

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|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **52)** **Rectangle MNRP is graphed below.**

|  |
| --- |
|  |
|  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-52-0.gif |

             **If MNRP is rotated 180 degrees to the left about the origin, what will the coordinates of Point R’ be?** |

|  |  |
| --- | --- |
|  **F**  | (-1, 4) |

|  |  |
| --- | --- |
|  **G**  | (4, -1) |

|  |  |
| --- | --- |
|  **H**  | (1, 4) |

|  |  |
| --- | --- |
|  **J**  | (-4, 1) |

 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **53)** **Amanda collected the data about the number of absences by students in her second period math class for the entire school year.** **Second Period Math Class**

|  |  |
| --- | --- |
| Number of Absences | Number of Students |
| 0-3 | 8 |
| 4-7 | 4 |
| 8-11 | 3 |
| 12-15 | 2 |
| 16-18 | 1 |

 **Which histogram best displays this data?** |

|  |  |
| --- | --- |
|  **A**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-53-0.gif |

|  |  |
| --- | --- |
|  **B**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-53-1.gif |

|  |  |
| --- | --- |
|  **C**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-53-2.gif |

|  |  |
| --- | --- |
|  **D**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-53-3.gif |

 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **54)** **This stem-and-leaf plot and this histogram show how many customers ate at Tony’s Pizza Place for the past 20 days.**  **Number of Customers at Tony’s Pizza**

|  |  |
| --- | --- |
| 2 | 9 |
| 3 | 1, 3, 5, 8, 9 |
| 4 | 4, 5, 6, 7, 7 |
| 5 | 5, 6, 7 |
| 6 | 0, 2, 3, 6, 8, 9 |

Key:  5|6 = 56

|  |
| --- |
|  |
|  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-54-0.gif |

 **What is true when you compare these two data displays?** |

|  |  |
| --- | --- |
|  **F**  | You can use both data displays to determine the total number of customers for the twenty days. |

|  |  |
| --- | --- |
|  **G**  | There are less customers represented on the histogram than on the stem-and-leaf plot. |

|  |  |
| --- | --- |
|  **H**  | The stem and leaf plot shows the exact number of customers each day whereas the histogram shows the number of times an interval of customers occurred. |

|  |  |
| --- | --- |
|  **J**  | Both data displays show that the range of 60-69 customers occurred the least amount of times when compared to other age ranges. |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **55)** **What statement best describes the data shown in this histogram?**C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-55-0.gif |

|  |  |
| --- | --- |
|  **A**  | As the age of the players increase, the number of players in that age range increases. |

|  |  |
| --- | --- |
|  **B**  | As the age of the players decrease, the number of players in that age group decreases. |

|  |  |
| --- | --- |
|  **C**  | As the age of the players increases, the number of players in that age group remains the same. |

|  |  |
| --- | --- |
|  **D**  | As the age of the players increases, the number of players in that age group decreases. |

 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **56)** **Which histogram represents the information in the stem-and-leaf plot?** **Ages of Library Visitors on Tuesday**

|  |  |
| --- | --- |
| 2 | 4 |
| 3 | 1, 3, 3, 8, 9 |
| 4 | 0, 4, 5, 5, 7 |
| 5 | 5, 6, 9 |
| 6 | 1, 2, 3, 8, 8, 9 |

key:  5|6 = 56 |

|  |  |
| --- | --- |
|  **F**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-56-0.gif |

|  |  |
| --- | --- |
|  **G**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-56-1.gif |

|  |  |
| --- | --- |
|  **H**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-56-2.gif |

|  |  |
| --- | --- |
|  **J**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-56-3.gif |

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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **57)** **Juan kept track of the high temperatures for the first 20 days of January. The table shows his findings. Which data display does NOT show how many days had high temperatures below 50 degrees?**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Date | High Temp. |   | Date | High Temp. |   | Date | High Temp. |   | Date | High Temp. |
| 1st | 65° |   | 6th | 54° |   | 11th | 39° |   | 16th | 52° |
| 2nd | 56° |   | 7th | 46° |   | 12th | 50° |   | 17th | 56° |
| 3rd | 60° |   | 8th | 40° |   | 13th | 33° |   | 18th | 42° |
| 4th | 55° |   | 9th | 35° |   | 14th | 45° |   | 19th | 38° |
| 5th | 57° |   | 10th | 42° |   | 15th | 50° |   | 20th | 41° |

 |

|  |  |
| --- | --- |
|  **A**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-57-0.gif |

|  |  |
| --- | --- |
|  **B**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-57-1.gif |

|  |  |
| --- | --- |
|  **C**  | C:\Documents and Settings\dspear\my documents\2nd 9 Weeks Study Guide_files\i-57-2.gif |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  **D**  | High Temperatures

|  |  |
| --- | --- |
| 3  | 3 5 8 9  |
| 4  | 0 1 2 2 5 6  |
| 5  | 0 0 2 4 5 6 6 7  |
| 6  | 0 5  |

3 | 0 = 30° |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **58)** **Which is the algebraic expression for a number, *p*, decreased by 10?** |

|  |  |
| --- | --- |
|  **F**  | *p* + 10 |

|  |  |
| --- | --- |
|  **G**  | 10 + *p* |

|  |  |
| --- | --- |
|  **H**  | *p* - 10 |

|  |  |
| --- | --- |
|  **J**  | 10 - *p* |

 |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **59)** **Which is the correct phrase to represent 2*z* - 3 ?** |

|  |  |
| --- | --- |
|  **A**  | a number, *z* , increased by 3 times 2 |

|  |  |
| --- | --- |
|  **B**  | a number, *z* , decreased by 3 twice |

|  |  |
| --- | --- |
|  **C**  | twice the number, *z* , decreased by 3 |

|  |  |
| --- | --- |
|  **D**  | 3 decreased by 2 times the number *z* |

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|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **60)** **Which verbal expression represents this algebraic expression?** 8(*y* + 4) |

|  |  |
| --- | --- |
|  **F**  | Four added to a number increased by eight |

|  |  |
| --- | --- |
|  **G**  | The quotient of eight and a number added to four |

|  |  |
| --- | --- |
|  **H**  | The sum of a number and four increased by eight |

|  |  |
| --- | --- |
|  **J**  | The product of eight and a number increased by four |

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