#### Study Island

**Copyright © 2016 Edmentum - All rights reserved.**

Generation Date: **09/15/2016**
Generated By: **Theresa Esposito**

#### Simplify & Evaluate Expressions

**1.** ![https://media.studyisland.com/cgi-bin/mimetex.cgi?\text%7bEvaluate%20the%20following%20expression%20for%20%7dz\,=\,290.\\%20\vspace*%7b9%20\hspace*%7b-10%7d%7d%20\\%20\begin%7barray%7d%7bc%7d\hspace*%7b500%7d%20\\8\%20+\%206%20\sqrt%7bz\%20-\%201%7d\end%7barray%7d](data:None;base64...)

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?238 |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?116 |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?110 |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?104 |

#### Linear Equations

**2.** A rental car company charges a base fee of $51.12 plus $0.47 per mile driven. If *x* represents the number of miles driven, which of the following equations could be used to find *y*, the total cost of the bill?

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | *y* = $0.77*x* + $51.12 |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | *y* = $0.47*x* + $51.12 |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | *y* = $51.12*x* + $0.47 |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | *y* = $51.59*x* |

#### Linear Equations

**3.** Technology Enhanced Questions are not available in Word format.

#### GCF & LCM of Monomials

**4.**

42*xy*2*z*      30*xy*3*z*3

What is the greatest common factor (GCF) of the monomials shown above?

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | 6*xy*2*z* |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | 210*xy*3*z*3 |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | 6*xy*3*z*3 |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | 210*x*2*y*5*z*4 |

#### Compare and Order Numbers

**5.** Order the following from greatest to least.

![https://media.studyisland.com/cgi-bin/mimetex.cgi?\frac%7b13%7d%7b40%7d\%20,\%200.34\%20,\%2030%25\%20,\%203.3%25\%20,\%20\frac%7b19%7d%7b25%7d](data:None;base64...)

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?\frac%7b19%7d%7b25%7d\%20,\%200.34\%20,\%20\frac%7b13%7d%7b40%7d\%20,\%2030%25\%20,\%203.3%25 |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?30%25\%20,\%203.3%25\%20,\%20\frac%7b19%7d%7b25%7d\%20,\%200.34\%20,\%20\frac%7b13%7d%7b40%7d |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?3.3%25\%20,\%2030%25\%20,\%20\frac%7b13%7d%7b40%7d\%20,\%200.34\%20,\%20\frac%7b19%7d%7b25%7d |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?\frac%7b19%7d%7b25%7d\%20,\%20\frac%7b13%7d%7b40%7d\%20,\%2030%25\%20,\%203.3%25\%20,\%200.34 |

#### Simplify Square Roots

**6.** Simplify.

![https://media.studyisland.com/cgi-bin/mimetex.cgi?\sqrt%7b486%7d](data:None;base64...)

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?18 |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?324 |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?81\sqrt%7b6%7d |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?9\sqrt%7b6%7d |

#### Linear Equations

**7.** Technology Enhanced Questions are not available in Word format.

#### Linear Equations

**8.** Technology Enhanced Questions are not available in Word format.

#### GCF & LCM of Monomials

**9.** Look at the two monomials below.

9*x*2*y*      5*x*2*y*4

What is the least common multiple (LCM) of the monomials shown above?

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | *x*4*y*5 |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | 45*x*4*y*5 |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | 45*x*2*y*4 |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | *x*2*y* |

#### Compare and Order Numbers

**10.** Complete the comparison below.

![https://media.studyisland.com/cgi-bin/mimetex.cgi?\frac%7b16%7d%7b17%7d\;](data:None;base64...)![https://media.studyisland.com/cgi-bin/mimetex.cgi?96.6%25](data:None;base64...)

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | > |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | < |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | = |

#### Estimation

**11.** Jim likes to go fishing on Lake Chippewa every Saturday. He usually catches between 4 and 12 fish. If only half of those fish are big enough to keep, then about how many fish does Jim take home in 6 weeks?

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | 48 fish |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | 36 fish |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | 16 fish |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | 24 fish |

#### Simplify & Evaluate Expressions

**12.** Evaluate the following expression when *n* = -8.

-3|*n* + 3|

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | -15 |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | -8 |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | 15 |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | 2 |

#### GCF & LCM of Monomials

**13.**

6*x*3*y*4      22*x*3*y*2      2*x*4*y*3

What is the greatest common factor (GCF) of the monomials shown above?

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | 2*x*4y4 |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | 2*x*3y2 |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | 66*x*10y9 |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | 66*x*4y4 |

#### Simplify Square Roots

**14.** Simplify.

![https://media.studyisland.com/cgi-bin/mimetex.cgi?\sqrt%7b700%7d](data:None;base64...)

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?100\sqrt%7b7%7d |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?10\sqrt%7b7%7d |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?7\sqrt%7b10%7d |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?70\sqrt%7b10%7d |

#### Simplify & Evaluate Expressions

**15.** Simplify the following expression.

![https://media.studyisland.com/cgi-bin/mimetex.cgi?3%5e%7b0%7d](data:None;base64...)

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?1 |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?3 |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?0 |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?\frac%7b1%7d%7b3%7d |

#### GCF & LCM of Monomials

**16.**

21*u*4*vw*3      14*u*2*v*2w

What is the greatest common factor (GCF) of the monomials shown above?

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | 42*u*2*vw* |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | 7*u*2*vw* |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | 42*u*6*v*3*w*4 |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | 7*u*4*v*2*w*3 |

#### Estimation

**17.** Samantha is painting a room. The room consists of four walls measuring 21 feet in length and 14 feet tall. If 1 gallon can of paint covers about 309 square feet, approximately how many cans of paint does Samantha need?

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?3.81 |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?0.95 |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?4.01 |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?0.45 |

#### Simplify Square Roots

**18.** Simplify.

![https://media.studyisland.com/cgi-bin/mimetex.cgi?\sqrt%7b432%7d](data:None;base64...)

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?12\sqrt%7b3%7d |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?144\sqrt%7b3%7d |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?72\sqrt%7b3%7d |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?6\sqrt%7b3%7d |

#### Compare and Order Numbers

**19.** Select the correct symbol.

|  |  |  |
| --- | --- | --- |
| https://media.studyisland.com/cgi-bin/mimetex.cgi?\sqrt%7b84%7d | ? | https://media.studyisland.com/cgi-bin/mimetex.cgi?\frac%7b48%7d%7b5%7d |

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | = |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | < |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | > |

#### Simplify Square Roots

**20.** Simplify.

![https://media.studyisland.com/cgi-bin/mimetex.cgi?\sqrt%7b810%7d](data:None;base64...)

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?90 |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?9\sqrt%7b10%7d |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?8\sqrt%7b10%7d |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?81\sqrt%7b10%7d |

#### Estimation

**21.** At the start of the month, Suzanne's clothing store website had 8,234 hits. At the end of the month, it had 40,281 hits. If each hit lasted 1.5 minutes, then what was the approximate total number of minutes on the website for this month?

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | 102,035 |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | 20,155 |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | 48,000 |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | 49,151 |

#### GCF & LCM of Monomials

**22.** Look at the two monomials below.

6*x*4*y*4      10*x*3*y*3*z*

What is the least common multiple (LCM) of the monomials shown above?

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | 30*x*4*y*4*z* |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | 2*x*3*y*3*z* |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | 2*x*3*y*3 |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | 30*x*7*y*7*z* |

#### Estimation

**23.** Each week, canned goods are donated to the local food bank. Last week, 60 people donated 1,200 canned goods. If 70 people donate this week, about how many cans can the food bank expect to receive?

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | 1,050 |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | 1,750 |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | 1,400 |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | 2,100 |

#### Simplify & Evaluate Expressions

**24.** Simplify: 15(|-7 + 15| + 7) - 15

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | 240 |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | 112 |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | 210 |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | 180 |

#### Estimation

**25.** Marcus has a part-time job at the water park. He makes between $66.60 and $72.58 a day. Which is a reasonable amount of money that Marcus makes for working 6 days a week for 11 weeks?

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | $4,820 |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | $4,558 |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | $4,831 |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | $4,826 |

#### Compare and Order Numbers

**26.** Order the following numbers from greatest to least.

![https://media.studyisland.com/cgi-bin/mimetex.cgi?7.\overline%7b2%7d\%20,\%20\frac%7b36%7d%7b5%7d\%20,\%20\sqrt%7b57%7d\%20,\%207.1](data:None;base64...)

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?\sqrt%7b57%7d\%20,\%20\frac%7b36%7d%7b5%7d\%20,\%207.1\%20,\%207.\overline%7b2%7d |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?\frac%7b36%7d%7b5%7d\%20,\%20\sqrt%7b57%7d\%20,\%207.1\%20,\%207.\overline%7b2%7d |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?\sqrt%7b57%7d\%20,\%207.\overline%7b2%7d\%20,\%20\frac%7b36%7d%7b5%7d\%20,\%207.1 |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?\frac%7b36%7d%7b5%7d\%20,\%207.1\%20,\%207.\overline%7b2%7d\%20,\%20\sqrt%7b57%7d |

#### Compare and Order Numbers

**27.** Complete the comparison below.

![https://media.studyisland.com/cgi-bin/mimetex.cgi?-0.75](data:None;base64...)![https://media.studyisland.com/cgi-bin/mimetex.cgi?-\frac%7b3%7d%7b4%7d](data:None;base64...)

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | = |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | < |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | > |

#### Linear Equations

**28.** Solve for x.

![https://media.studyisland.com/cgi-bin/mimetex.cgi?9(5x\%20-\%208)\%20=\%2090x](data:None;base64...)

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?x\%20=\%20\frac%7b2%7d%7b5%7d |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?x\%20=\%20\frac%7b18%7d%7b5%7d |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?x\%20=\%20-\frac%7b8%7d%7b5%7d |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?x\%20=\%20\frac%7b8%7d%7b5%7d |

#### Simplify Square Roots

**29.**

![https://media.studyisland.com/cgi-bin/mimetex.cgi?5\sqrt%7b71x%7d](data:None;base64...)

Which value of *x* makes the expression above equivalent to ![https://media.studyisland.com/cgi-bin/mimetex.cgi?35\sqrt%7b71%7d](data:None;base64...)?

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | 7 |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | 245 |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | 49 |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | 1,225 |

#### Simplify & Evaluate Expressions

**30.** Expand and simplify:

![https://media.studyisland.com/cgi-bin/mimetex.cgi?(3\sqrt%7b2%7d\%20+\%203\sqrt%7b5%7d)](data:None;base64...)![https://media.studyisland.com/cgi-bin/mimetex.cgi?(3\sqrt%7b2%7d\%20+\%205\sqrt%7b5%7d)](data:None;base64...)

|  |  |  |
| --- | --- | --- |
| Bubble | **A.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?93+ https://media.studyisland.com/cgi-bin/mimetex.cgi?24\sqrt%7b5%7d |

|  |  |  |
| --- | --- | --- |
| Bubble | **B.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?93+ https://media.studyisland.com/cgi-bin/mimetex.cgi?24\sqrt%7b10%7d |

|  |  |  |
| --- | --- | --- |
| Bubble | **C.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?21+ https://media.studyisland.com/cgi-bin/mimetex.cgi?24\sqrt%7b10%7d |

|  |  |  |
| --- | --- | --- |
| Bubble | **D.** | https://media.studyisland.com/cgi-bin/mimetex.cgi?21+ https://media.studyisland.com/cgi-bin/mimetex.cgi?24\sqrt%7b2%7d |