**Assigned: Thursday 3/29 MUST SHOW WORK FOR CREDIT**

**UNIT 1: RELATIONSHIPS BETWEEN QUANTITIES Review Homework Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |
| --- | --- |
| **Question** | **Answer** |
| **Use Properties of Rational and Irrational Numbers** |  |
| 1**. Look at the radical.** $-8\sqrt{726}$**Which of these is equivalent to this expression?****A**. $-88\sqrt{6}$**B**. -90.75**C**. -986$\sqrt{6}$**D**. $-2,904$ |  |
| 2. **Look at the expression**. $2\sqrt{8}∙\sqrt{20}$**A**. $2\sqrt{28}$**B**. 5**C**. $8\sqrt{10}$**D**. $32\sqrt{10}$ |  |
| 3. **Which sum is rational?****A.** $π+18$**B.** $\sqrt{25}+1.75$**C**. $\sqrt{3}+5.5$**D.** $π+2$ |  |
| 4. **Which product is irrational?****A.** $\sqrt{2}∙\sqrt{50}$**B.**$ \sqrt{64}∙\sqrt{4}$**C.** $\sqrt{9}∙\sqrt{49}$**D.**$ \sqrt{10}∙\sqrt{8}$ |  |
| Reason Quantitatively and Use Units to Solve Problems |  |
| 5. **Convert 309 yards to feet.** |  |
| 6. **Convert 45 miles per hour to feet per minute.** |  |
| 7. **When Justin goes to work, he drives at an average speed of 65 miles per hour. It takes about 1 hour and 30 minutes for Justin to arrive at work. His car travels about 25 miles per gallon of gas. If gas costs $3.65 per gallon, how much money does Justin spend on gas to travel to work?** |  |
| 8. **The formula for density *d* is** $d=\frac{m}{v}$**, , where *m* is mass and *v* is volume. If mass is measured in kilograms and volume is measured in cubic meters, what is the unit for density?**  |  |
| 9. **A rectangle has a length of 12 meters and a width of 400 centimeters**. **What is the perimeter, in cm, of the rectangle?** **A.**  824 cm **B.** 1,600 cm **C.** 2,000 cm **D.** 3,200 cm  |  |
| 10. **Jill swam 200 meters in 2 minutes 42 seconds**. **If each lap is 50 meters long, which is MOST LIKELY to be her time, in seconds, per lap?** **A.** 32 seconds **B.** 40 seconds **C.** 48 seconds **D.** 60 seconds  |  |
| Interpret the Structure of Expressions |  |
| 11. **Consider the expression** $3n^{2}+n+2$**.** **a. What is the coefficient of *n*?** **b. What terms are being added in the expression?**  |  |
| 12. **Look at one of the formulas for the perimeter of a rectangle where *l* represents the length and *w* represents the width. 2(*l* + *w*)****What does the 2 represent in this formula?** |  |
| 13. **In which expression is the coefficient of term “n” – 1?****A.** 3n2 + 4n – 1**B.** –n2 + 5n + 4**C.** –2n2 – n + 5**D**. 4n2 + n – 5 |  |
| 14. **The expression s2 is used to calculate the area of a square, where s is the side length of the square. What does the expression (8x)2 represent?****A**. the area of a square with a side length of 8**B**. the area of a square with a side length of 16**C**. the area of a square with a side length of 4x**D**. the area of a square with a side length of 8x |  |
| **Perform Arithmetic Operations on Polynomials**  |  |
| 15. **aThe dimensions of a rectangle are shown. What is the perimeter, in units, of the rectangle?**nd Use Units to Solve Problems |  |
| 16. **Rewrite the expression (x3 + 2x2 – x) – (–x3 + 2x2 + 6).** |  |
| 17. **The dimensions of a patio, in feet, are shown below. What is the area of the patio, in square feet?** |  |
| 18. **What is the product of 7*x* – 4 and 8*x* + 5 ?** **A.** 15*x* + 1 **B.** 30*x* + 2 **C.** 56*x*2 + 3*x* – 20 **D.** 56*x*2 – 3*x* + 20  |  |
| 19. **A model of a house is shown. What is the perimeter, in units, of the model?****A.** 32*x* + 12 units **B.** 46*x* + 25 units **C.** 50*x* + 11 units **D.** 64*x* + 24 units  |  |
| 20. **Which expression has the same value as the expression** **(8*x*2 + 2*x* – 6) – (5*x*2 – 3*x* + 2)?** **A.** 3*x*2 – *x* – 4 **B.** 3*x*2 + 5*x* – 8 **C.** 13*x*2 – *x* – 8 **D.** 13*x*2 – 5*x* – 4  |  |