

ANSWER KEY

Integer Addition Practice Exercises ANSWERS:

$$(-6) + 2 = -4$$

$$1 + 4 = 5$$

$$6 + (-7) = -1$$

$$7 + (-7) = 0$$

$$(-1) + 9 = 8$$

$$(-4) + (-5) = -9$$

$$(-2) + (-2) = -4$$

$$(-2.5) + (-1.0) = -3.5$$

$$(+5.0) + (+1.5) = 6.5$$

$$(+2.45) + (+6.00) = 8.45$$

Integer Subtraction Practice Exercises ANSWERS:

$$(-9) - (-4) = -5$$

$$(+1) - (+4) = -3$$

$$(+3) - (+4) = -1$$

$$(+1) - (+3) = -2$$

$$(+7) - (+9) = -2$$

$$(+8) - (-9) = 17$$

$$(-1.25) - (-2.75) = 1.5$$

$$(-3.5) - (-2.5) = -1$$

$$(+3.45) - (+5.00) = -1.55$$

$$(-2.00) - (+1.50) = -3.50$$

Integer Multiplication and Addition Practice Exercises ANSWERS:

$$(-2) \times (-4) = 8$$

$$6 \times (-5) = -30$$

$$(-9) \times 2 = -18$$

$$(-8) \times (-8) = 64$$

$$(-6) \times (-3) = 18$$

$$8 \times (-9) = -72$$

$$7 \times 2 = 14$$

$$(-8) \times 2 = -16$$

$$(-1.50) \times (-2.00) = 3.00$$

$$(+3.00) \times (+8.00) = 24.00$$

$$35 \div -5 = -7$$

$$-24 \div 4 = -6$$

$$8 \div 4 = 2$$

$$(-1.5) \div (-3.00) = 0.5$$

$$(-3.0) \div (-12.0) = 0.25$$

$$(+24.00) \div (+8.00) = 3.00$$

Integer Applied Practice Exercises ANSWERS:

Death Valley is the lowest point in the U.S. at an elevation of -280 feet (280 feet below sea level). Mount McKinley is the highest at an elevation of 20,320 feet. What is the difference in elevation between these two points? **20,600 feet difference**

Mount Kilimanjaro is the highest point in Africa at an elevation of 19,321 feet. Qattara Depression in Egypt is the lowest point at - 436 feet (436 feet below sea level). What is the difference in elevation between these two points? **19,757 feet difference**

The temperature in Death Valley varies quite greatly. The record high temperature is 134 degrees above zero while the record low temperature is -18, or 18 degrees below zero. What is the difference between the record high and low temperatures? **152 degree difference**

An airplane is flying 3500 feet above sea level. It is directly above a whale that is 250 feet below the surface. How far above the whale is the airplane? **3750 foot difference**

Jack has a checking account balance of - \$58.50. He gets paid and has his check of \$ 600.00 automatically deposited. How much money does he now have in his account after getting paid? **\$541.50 account balance**

A football team has the ball on the 35-yard line. The quarter-back gets sacked so the play leaves the team with minus 15 yards. What yard line will be the beginning point for the next play? **20-yard line**

Order of Operations Practice Exercises ANSWERS:

$$(30 - 3) \div 3 = 9$$

$$10 + 2 \div 2 = 11$$

$$1 + 7^2 = 50$$

$$15 + 40 \div 20 = 17$$

$$9 \times (3 + 3) \div 6 = 9$$

$$6 + (5 + 8) \times 4 = 58$$

$$(12 - 2 + 6) \div 2 = 8$$

$$20 \div 4 + 6 \times 2 = 17$$

$$5 + 3 \times (6+2) = 29$$

$$7 \times 9 - 7 - 3 \times 5 = 41$$

Evaluating Formulas Practice Exercises ANSWERS:

Using the distance formula $d=rt$, determine the distance that Kevin can travel if he drives at a speed (rate, r) of 55 miles per hour for 5 hours (time, t). **DISTANCE = 275 MILES**

Using the rate formula $r = d/t$, determine the speed (r) that Keke drove when she traveled 195 miles (d) in 3 hours (t). **SPEED = 65 MILES PER HOUR**

Using the time formula $t = d/r$, determine how long (t) it will take Sandra to drive 280 miles if she drives the maximum speed limit of 70 miles per hour. **TIME = 4 HOURS**

Use the temperature formula $F = 1.8C + 32$, to find the Fahrenheit temperature (F) when the Centigrade (C) is 100 degrees. This is the boiling point of water. Remember, a number beside a letter means to multiply the two values together. **FAHRENHEIT TEMPERATURE = 212 DEGREES**

The formula to calculate a the body mass index (BMI) of a person using the English system of measurements is calculated by dividing the weight, W by the height, h squared and multiplying by 703, $BMI = W / h^2 \times 703$. What is the BMI of a six foot man weighing 155 pounds rounded to the nearest whole number? (Remember there are 12 inches in each foot so change the six feet to inches before calculating the BMI). **BMI = 21**

You can calculate the target heart rate, HR, in beats per minute for vigorous exercise by subtracting your age, A from 220 and multiplying that number by 70%. The formula is $HR = (220 - A) \times 70\%$. What is the target heart rate for a 30-year-old person exercising vigorously? **TARGET HEART RATE = 133**

Decimal Place Value Practice Exercises ANSWERS:

Name the decimal place of the five in the following numbers.

1.57 **TENTHS**

2.05 **HUNDREDTHS**

4.265 **THOUSANDTHS**

1.532 **TENTHS**

24.935 **THOUSANDTHS**

41.54 **TENTHS**

37.518 **TENTHS**

33.058 **HUNDREDTHS**

7.508 **TENTHS**

42.657 **HUNDREDTHS**

Reading Decimals Practice Exercises ANSWERS:

Write each number in words.

0.7 **seven tenths**

0.14 **fourteen hundredths**

1.203 **one and two hundred three thousandths**

0.0803 **eight hundred three ten-thousandths**

40.70 **forty and seventy hundredths**

62.314 **sixty-two and three hundred fourteen thousandths**

41.54 **forty-one and fifty-four hundredths**

8.66 **eight and sixty-six hundredths**

61.1 **sixty-one and one tenth**

2.57 **two and fifty-seven hundredths**

Rounding Numbers Practice Exercises ANSWERS:

Round to the nearest tenth: $37.518 = 37.5$

Round to the nearest hundredth: $2.952 = 2.95$

Round to the nearest whole number: $7.508 = 8$

Round to the nearest hundredth: $374.608 = 374.61$

Round to the nearest thousandth: $601.3576 = 601.358$

Round to the nearest tenth: $97.03 = 97.0$

Round to the nearest hundredth: $73.683 = 73.68$

Round to the nearest tenth: $608.17 = 608.2$

Round to the nearest whole number: $10.14 = 10$

Round to the nearest thousandth: $3.73142 = 3.731$

Significant Digits Practice Exercises ANSWERS:

State the number of significant digits:

38.27 **four**

0.00298 **three**

29700 **three**

120.0048 **seven**

9.050 **four**

12,000 **two**

0.03040 **four**

0.001250 **four**

284 **three**

5.029 **four**

Trigonometry Ratio Practice Exercises ANSWERS:

Find the following trig ratios rounded to the nearest hundredth:

$$\sin 45 \text{ degrees} = \mathbf{0.71}$$

$$\cos 32 \text{ degrees} = \mathbf{0.85}$$

$$\tan 19 \text{ degrees} = \mathbf{0.34}$$

$$\sin 65 \text{ degrees} = \mathbf{0.91}$$

$$\cos 65 \text{ degrees} = \mathbf{0.42}$$

$$\sin 48 \text{ degrees} = \mathbf{0.74}$$

$$\sin 38 \text{ degrees} = \mathbf{0.62}$$

$$\cos 61 \text{ degrees} = \mathbf{0.48}$$

$$\cos 51 \text{ degrees} = \mathbf{0.63}$$

$$\tan 65 \text{ degrees} = \mathbf{2.14}$$

Trigonometry Ratios Practice Exercises ANSWERS:

A person is standing 16 feet from the side of a house. The angle from the ground to the top of the house is 56 degrees. What is the height of the house rounded to the nearest foot? **24 feet high**

The angle from the ground to the top of a building is 38 degrees from 90 feet away. How tall is the building rounded to the nearest foot? **70 feet tall**

A fire tower is 85 feet away. The angle from the ground to the top of the tower is 52 degrees. What is the height of the tower rounded to the nearest foot? **109 feet high**

A building casts a shadow on the ground that is 44 feet long. The angle formed by the shadow and the top of the building is 65 degrees. What is the height of the building rounded to the nearest foot? **94 feet high**

Inverse Trigonometric Ratios Practice Exercises ANSWERS:

Find each angle measure to the nearest degree:

$$\sin B = 0.4848 = \mathbf{29 \text{ degrees}}$$

$$\cos A = 0.7431 = \mathbf{42 \text{ degrees}}$$

$$\sin A = 0.5150 = \mathbf{31 \text{ degrees}}$$

$$\cos A = 0.4226 = \mathbf{65 \text{ degrees}}$$

$$\tan C = 0.5317 = \mathbf{28 \text{ degrees}}$$

$$\tan A = 19.0811 = \mathbf{87 \text{ degrees}}$$

$$\cos C = 0.6157 = \mathbf{52 \text{ degrees}}$$

$$\cos A = 0.5878 = \mathbf{54 \text{ degrees}}$$