

Order of Operations

Answers

Evaluate each expression.

1) $(30 - 3) \div 3$

9

2) $(21 - 5) \div 8$

2



3) $1 + 7^2$

50

4) $5 \times 4 - 8$

12

5) $8 + 6 \times 9$

62

6) $3 + 17 \times 5$

88

7) $7 + 12 \times 11$

139

8) $15 + 40 \div 20$

17

9) $20 + 16 - 15$

21

10) $19 - 15 - 3$

1

11) $9 \times (3 + 3) \div 6$

9

12) $(9 + 18 - 3) \div 8$

3

ANSWERS

$$13) 9 + 6 \div (8 - 2)$$

10

$$14) 4(4 \div 2 + 4)$$

24

$$15) 6 + (5 + 8) \times 4$$

58

$$16) 6 \times 6 - (7 + 5)$$

24



$$17) (9 \times 2) \div (2 + 1)$$

6

$$18) 2 - (4 + 3 - 6)$$

1

$$19) 7 \times 7 - (8 - 2)$$

43

$$20) 9 - 7 - 6 \div 6$$

1

$$21) (4 - 1 + 8 \div 8) \times 5$$

20

$$22) (10 \times 2) \div (1 + 1)$$

10

$$23) 7 \times 9 - 7 - 3 \times 5$$

41

$$24) 8 - 1 - (18 - 2) \div 8$$

5

Adding, Subtracting, Multiplying and Dividing Integers (A) Answers

Name: _____

Date: _____

Score: _____

Calculate each sum, difference, product or quotient.

$$(+2) \times (-12) = (-24)$$

$$(-132) \div (-12) = (+11)$$

$$(+8) + (+7) = (+15)$$

$$(-10) + (-10) = (-20)$$

$$(+12) - (+5) = (+7)$$

$$(-10) + (-6) = (-16)$$

$$(+8) - (-2) = (+10)$$

$$(-12) + (+1) = (-11)$$

$$(+9) \times (-12) = (-108)$$

$$(+9) + (+11) = (+20)$$

$$(+18) \div (-9) = (-2)$$

$$(+11) \times (-8) = (-88)$$

$$(-7) + (-8) = (-15)$$

$$(+44) \div (+11) = (+4)$$

$$(-3) \times (-9) = (+27)$$

$$(+9) + (-9) = (0)$$

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

$$(+5) + (-8) = (-3)$$

$$(+9) - (-7) = (+16)$$

$$(-1) - (-8) = (+7)$$

$$(+6) \times (-11) = (-66)$$

$$(-132) \div (-11) = (+12)$$

$$(-10) - (+3) = (-13)$$

$$(-8) \div (-1) = (+8)$$

$$(-27) \div (-3) = (+9)$$

$$(-12) \div (+12) = (-1)$$

$$(-2) \times (+10) = (-20)$$

$$(-6) + (+12) = (+6)$$

$$(+1) \times (-10) = (-10)$$

$$(-12) - (-9) = (-3)$$

$$(+11) + (-3) = (+8)$$

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

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

$$(+3) - (+3) = (0)$$

$$(-3) - (-12) = (+9)$$

$$(-11) + (-1) = (-12)$$

$$(-11) + (-4) = (-15)$$

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

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

$$(+8) - (+5) = (+3)$$

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

$$(+11) + (-11) = (0)$$

$$(+5) - (-12) = (+17)$$

$$(-6) \times (-9) = (+54)$$

$$(+35) \div (+5) = (+7)$$

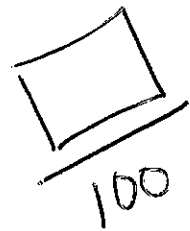
$$(-2) + (+11) = (+9)$$

$$(-11) - (-6) = (-5)$$

$$(+3) \times (-5) = (-15)$$

$$(-48) \div (-12) = (+4)$$

$$(+11) - (-7) = (+18)$$



Adding, Subtracting, Multiplying and Dividing Integers (B) Answers

Name: _____

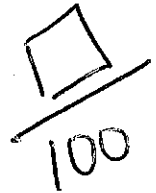
Date: _____

Score: _____

Calculate each sum, difference, product or quotient.

$$(+2) - (-8) = (+10)$$

$$(-8) - (+6) = (-14)$$



$$(-11) + (-7) = (-18)$$

$$(-11) \times (+3) = (-33)$$

$$(-88) \div (-11) = (+8)$$

$$(-5) \times (+11) = (-55)$$

$$(+44) \div (-11) = (-4)$$

$$(-11) \times (-2) = (+22)$$

$$(+10) + (+12) = (+22)$$

$$(-5) - (+9) = (-14)$$

$$(+20) \div (-10) = (-2)$$

$$(+6) \times (+11) = (+66)$$

$$(+10) - (+1) = (+9)$$

$$(-10) \times (+8) = (-80)$$

$$(+8) \times (-4) = (-32)$$

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

$$(-6) - (-10) = (+4)$$

$$(+11) - (+11) = (0)$$

$$(+12) - (-3) = (+15)$$

$$(-9) + (+11) = (+2)$$

$$(-50) \div (+5) = (-10)$$

$$(+4) \times (+9) = (+36)$$

$$(+9) \times (+9) = (+81)$$

$$(+3) \times (-4) = (-12)$$

$$(+7) - (-10) = (+17)$$

$$(-14) \div (+7) = (-2)$$

$$(+7) + (+11) = (+18)$$

$$(+2) - (-9) = (+11)$$

$$(-8) + (+7) = (-1)$$

$$(-110) \div (+10) = (-11)$$

$$(+7) \times (-8) = (-56)$$

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

$$(+12) - (+1) = (+11)$$

$$(+2) + (+6) = (+8)$$

$$(+3) + (-10) = (-7)$$

$$(+4) + (-12) = (-8)$$

$$(+12) - (+7) = (+5)$$

$$(+40) \div (+8) = (+5)$$

$$(-10) \times (+2) = (-20)$$

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

$$(-12) - (+5) = (-17)$$

$$(+8) + (-12) = (-4)$$

$$(-6) \times (-12) = (+72)$$

$$(-2) - (+3) = (-5)$$

$$(-6) \times (-8) = (+48)$$

$$(+108) \div (-9) = (-12)$$

$$(+4) + (-10) = (-6)$$

$$(-16) \div (+4) = (-4)$$

$$(+10) \times (-6) = (-60)$$

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

Name :

Calculating Mean, Median, Mode and Range Worksheet

$$\frac{\square}{24}$$

Answers.

Rough work

① 86, 13, 60, 55, 61, 97, 30, 98, 79, 52, 18

Mean: 59 Median: 60

Mode: None Range: 85

② 12, 36, 64, 65, 82

Mean: 51.8 Median: 64

Mode: None Range: 20

③ 12, 5, 9, 18, 22, 25, 5

Mean: 13.71 Median: 12

Mode: 5 Range: 20

④ 83, 23, 24, 71, 52, 62, 63

Mean: 54 Median: 62

Mode: None Range: 60

⑤ 19, 21, 29, 32, 89

Mean: 38 Median: 29

Mode: None Range: 70

⑥ 41, 41, 41, 44, 90

Mean: 51.4 Median: 41

Mode: 41 Range: 49

One-Step Equations — *Answers*

Solve each equation.

1) $26 = 8 + v$

{18}

2) $3 + p = 8$

{5}

3) $15 + b = 23$

{8}

4) $-15 + n = -9$

{6}

5) $m + 4 = -12$

{-16}

6) $x - 7 = 13$

{20}

7) $m - 9 = -13$

{-4}

8) $p - 6 = -5$

{1}

9) $v - 15 = -27$

{-12}

10) $n + 16 = 9$

{-7}

11) $-104 = 8x$

{-13}

12) $14b = -56$

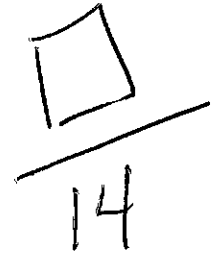
{-4}

13) $-6 = \frac{b}{18}$

{-108}

14) $10n = 40$

{4}



$$15) \frac{v}{8} = 2$$

{16}

$$16) 16 = \frac{k}{11}$$

{176}

$$17) -15x = 0$$

{0}

$$18) -17x = -204$$

{12}

$$19) 21 = -7n$$

{-3}

$$20) \frac{m}{4} = -13$$

{-52}

$$21) -126 = 14k$$

{-9}

$$22) -143 = -11x$$

{13}

$$23) -16 + x = -15$$

{1}

$$24) -5 = \frac{a}{18}$$

{-90}

$$25) -17 = x - 15$$

{-2}

$$26) n - 8 = -10$$

{-2}

$$27) \frac{v}{7} = 8$$

{56}

$$28) a + 11 = 20$$

{9}

$$29) -7 + m = 8$$

{15}

$$30) 18 + m = 8$$

{-10}



Adding and Subtracting Two Mixed Fractions (A) Answers

Name: _____

Date: _____

Score: _____

Calculate each result.

$$1. \quad 9\frac{1}{5} - 1\frac{6}{10} = \frac{46}{5} - \frac{16}{10} = \frac{92}{10} - \frac{16}{10} = \frac{76}{10} = \frac{38}{5} = 7\frac{3}{5}$$

$$2. \quad 5\frac{4}{6} + 2\frac{10}{18} = \frac{34}{6} + \frac{46}{18} = \frac{102}{18} + \frac{46}{18} = \frac{148}{18} = \frac{74}{9} = 8\frac{2}{9}$$

$$3. \quad 7\frac{2}{15} - 2\frac{2}{3} = \frac{107}{15} - \frac{8}{3} = \frac{107}{15} - \frac{40}{15} = \frac{67}{15} = 4\frac{7}{15}$$

$$4. \quad 5\frac{1}{4} - \frac{5}{8} = \frac{21}{4} - \frac{5}{8} = \frac{42}{8} - \frac{5}{8} = \frac{37}{8} = 4\frac{5}{8}$$

$$5. \quad 9\frac{10}{20} - 1\frac{2}{4} = \frac{190}{20} - \frac{6}{4} = \frac{190}{20} - \frac{30}{20} = \frac{160}{20} = \frac{8}{1} = 8$$

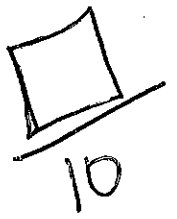
$$6. \quad 5\frac{1}{3} - 1\frac{4}{12} = \frac{16}{3} - \frac{16}{12} = \frac{64}{12} - \frac{16}{12} = \frac{48}{12} = \frac{4}{1} = 4$$

$$7. \quad 3\frac{1}{2} + 9\frac{3}{6} = \frac{7}{2} + \frac{57}{6} = \frac{21}{6} + \frac{57}{6} = \frac{78}{6} = \frac{13}{1} = 13$$

$$8. \quad 3\frac{1}{6} + 4\frac{1}{12} = \frac{19}{6} + \frac{49}{12} = \frac{38}{12} + \frac{49}{12} = \frac{87}{12} = \frac{29}{4} = 7\frac{1}{4}$$

$$9. \quad 9\frac{3}{5} + 4\frac{4}{10} = \frac{48}{5} + \frac{44}{10} = \frac{96}{10} + \frac{44}{10} = \frac{140}{10} = \frac{14}{1} = 14$$

$$10. \quad \frac{2}{3} + 1\frac{11}{18} = \frac{2}{3} + \frac{29}{18} = \frac{12}{18} + \frac{29}{18} = \frac{41}{18} = 2\frac{5}{18}$$

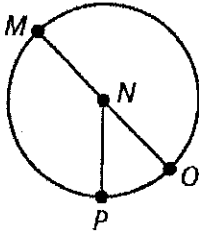


Post-Test

Name _____ Date _____

Use 3,14 for π . Round answers to the nearest hundredth if necessary.

1. A circle is shown.



Identify each of the following in the figure.

- a. The center of the circle

Point N is the center of the circle.

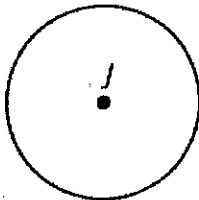
- b. A diameter of the circle

Line segment MO is a diameter of the circle.

- c. Three radii of the circle

Line segments NM , NO , and NP are radii of the circle.

2. Consider Circle J .



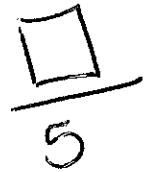
- a. Calculate the diameter of Circle J if the circumference is 100.48 centimeters.

$$d = \frac{C}{\pi} \approx \frac{100.48}{3.14} = 32 \text{ centimeters}$$

- b. Calculate the circumference of Circle J if the radius is 7 meters.

$$\begin{aligned} C &= \pi d = \pi(2r) \approx (3.14)(2)(7) \\ &= 43.96 \text{ meters} \end{aligned}$$

WEER 3 - DAY 1



3. Brianna ran 6 laps around a circular track with diameter of length 120 feet. How far did she run?

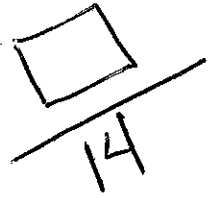
$$C = \pi d$$

$$C \approx 3.14(120) = 376.8$$

$$6(376.8) = 2260.8$$

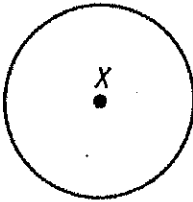
WEEK 3

DAYS 2 + 3



The circumference of the track is approximately 376.8 feet. Brianna ran 6 laps around the track, so she ran a total of approximately 2260.8 feet.

4. Consider Circle X.



- a. Calculate the area of Circle X if the diameter is 13 inches.

$$r = \frac{d}{2} = \frac{13}{2} = 6.5 \text{ inches}$$

$$A = \pi r^2 \approx (3.14)(6.5^2)$$

$$\approx 132.67 \text{ square inches}$$

- b. Calculate the diameter of Circle M if the circumference is 379.94 millimeters.

$$C = \pi d$$

$$d = \frac{C}{\pi}$$

$$d \approx \frac{379.94}{3.14}$$

$$d \approx 121 \text{ millimeters}$$

5. A round garden has a circumference of 15.7 feet. Calculate the area of the garden.

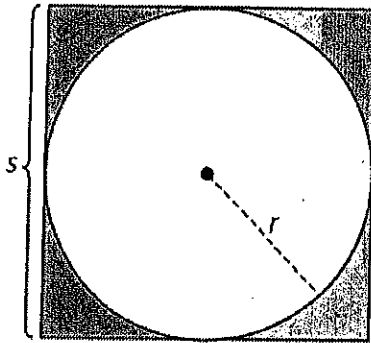
$$C = \pi d$$

$$d = \frac{C}{\pi} \approx \frac{15.7}{3.14} = 5 \text{ feet}$$

$$r = \frac{d}{2} = \frac{5}{2} = 2.5 \text{ feet}$$

$$A = \pi r^2 \approx (3.14)(2.5^2) = 19.63 \text{ square feet}$$

6. A circle with radius r is inscribed inside a square with a side length s .



- a. Write an expression for the area of the shaded region.

The area of the shaded region is equal to the area of the square minus the area of the circle.

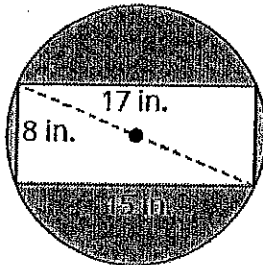
$$A = s^2 - \pi r^2$$

- b. If $s = 10$ millimeters and $r = 5$ millimeters, calculate the area of the shaded region.

$$A = s^2 - \pi r^2 \approx (10)^2 - (3.14)(5^2)$$

$$= 21.5 \text{ square millimeters}$$

7. A rectangle is inscribed in a circle.



- a. Calculate the area of the circle.

The length of the diameter is 17 inches, so the length of a radius of the circle is 8.5 inches.

$$A = \pi r^2$$

$$A \approx 3.14(8.5)^2 = 226.87$$

The area of the circle is approximately 226.87 square inches.

- b. Calculate the area of the rectangle.

$$A = bh$$

$$A = (15)(8) = 120$$

The area of the rectangle is 120 square inches.

- c. Calculate the area of the shaded region.

$$226.87 - 120 = 106.87$$

Approximately: 106.87 square inches

8. The advertised size of a pizza is the length of its diameter.

- a. What is the area of a 12-inch pizza?

$$A = \pi r^2$$

The diameter is 12 inches, so the radius is 6 inches.

$$A \approx 3.14(6)^2 = 113.04$$

The area of the pizza is approximately 113.04 square inches.

- b. If a 12-inch pizza costs \$9.75 and is cut into 10 slices, what is the cost per slice?

To determine the cost per slice, I need to divide the pizza cost by the number of slices.

$$9.75 \div 10 = 0.975$$

≈ \$0.98 per slice

- c. What is the cost per square inch?

To determine the cost per square inch, I need to divide the pizza cost by the area of the pizza.

$$9.75 \div 113.04 = 0.08625$$

≈ \$0.09 per square inch

9. Darius designed a billboard. The billboard is 480 inches long by 144 inches high. Darius uses a computer to design the billboard. Determine the unknown dimension for the computer design that maintains the same scale.

12 inches long by x inches high

$$\frac{480}{144} = \frac{12}{x}$$

$$480x = 1728$$

$$x = 3.6$$

The unknown dimension is 3.6 inches high.

10. The scale factor used to create a toy from an actual animal is 1 : 30. The toy animal is 5 inches tall. How tall is the actual animal?

A scale factor of 1 : 30 means the actual animal is 30 times taller than the toy animal.

$$5 \cdot 30 = 150$$

The actual animal is 150 inches (or 12.5 feet) tall.

4-Digit by 2-Digit Division (A) Answers

Name: _____

Date: _____

Calculate each quotient.

$$\begin{array}{r} 156 \\ 22 \overline{)3441} \\ \underline{-22} \\ 124 \\ \underline{-110} \\ 141 \\ \underline{-132} \\ 9 \end{array}$$

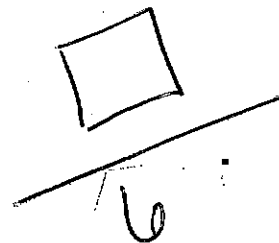
$$\begin{array}{r} 111 \\ 47 \overline{)5258} \\ \underline{-47} \\ 55 \\ \underline{-47} \\ 88 \\ \underline{-47} \\ 41 \end{array}$$

$$\begin{array}{r} 121 \\ 66 \overline{)8001} \\ \underline{-66} \\ 140 \\ \underline{-132} \\ 81 \\ \underline{-66} \\ 15 \end{array}$$

$$\begin{array}{r} 555 \\ 15 \overline{)8338} \\ \underline{-75} \\ 83 \\ \underline{-75} \\ 88 \\ \underline{-75} \\ 13 \end{array}$$

$$\begin{array}{r} 297 \\ 14 \overline{)4166} \\ \underline{-28} \\ 136 \\ \underline{-126} \\ 106 \\ \underline{-98} \\ 8 \end{array}$$

$$\begin{array}{r} 168 \\ 34 \overline{)5745} \\ \underline{-34} \\ 234 \\ \underline{-204} \\ 305 \\ \underline{-272} \\ 33 \end{array}$$



Simplifying Proper Fractions (A) Answers

Name: _____

Date: _____

Simplify each fraction to its lowest terms

$$1. \frac{7}{14} \xrightarrow{\div 7} \frac{1}{2}$$

$$11. \frac{24}{33} \xrightarrow{\div 3} \frac{8}{11}$$

$$21. \frac{9}{27} \xrightarrow{\div 9} \frac{1}{3}$$

$$31. \frac{8}{56} \xrightarrow{\div 8} \frac{1}{7}$$

$$2. \frac{4}{20} \xrightarrow{\div 4} \frac{1}{5}$$

$$12. \frac{24}{40} \xrightarrow{\div 8} \frac{3}{5}$$

$$22. \frac{7}{56} \xrightarrow{\div 7} \frac{1}{8}$$

$$32. \frac{27}{99} \xrightarrow{\div 9} \frac{3}{11}$$

$$3. \frac{14}{21} \xrightarrow{\div 7} \frac{2}{3}$$

$$13. \frac{40}{110} \xrightarrow{\div 10} \frac{4}{11}$$

$$23. \frac{45}{54} \xrightarrow{\div 9} \frac{5}{6}$$

$$33. \frac{4}{12} \xrightarrow{\div 4} \frac{1}{3}$$

$$4. \frac{12}{21} \xrightarrow{\div 3} \frac{4}{7}$$

$$14. \frac{36}{40} \xrightarrow{\div 4} \frac{9}{10}$$

$$24. \frac{30}{55} \xrightarrow{\div 5} \frac{6}{11}$$

$$34. \frac{3}{6} \xrightarrow{\div 3} \frac{1}{2}$$

$$5. \frac{12}{18} \xrightarrow{\div 6} \frac{2}{3}$$

$$15. \frac{2}{18} \xrightarrow{\div 2} \frac{1}{9}$$

$$25. \frac{20}{35} \xrightarrow{\div 5} \frac{4}{7}$$

$$35. \frac{9}{54} \xrightarrow{\div 9} \frac{1}{6}$$

$$6. \frac{5}{50} \xrightarrow{\div 5} \frac{1}{10}$$

$$16. \frac{10}{120} \xrightarrow{\div 10} \frac{1}{12}$$

$$26. \frac{30}{36} \xrightarrow{\div 6} \frac{5}{6}$$

$$36. \frac{9}{18} \xrightarrow{\div 9} \frac{1}{2}$$

$$7. \frac{30}{72} \xrightarrow{\div 6} \frac{5}{12}$$

$$17. \frac{8}{96} \xrightarrow{\div 8} \frac{1}{12}$$

$$27. \frac{10}{24} \xrightarrow{\div 2} \frac{5}{12}$$

$$37. \frac{3}{24} \xrightarrow{\div 3} \frac{1}{8}$$

$$8. \frac{4}{40} \xrightarrow{\div 4} \frac{1}{10}$$

$$18. \frac{50}{60} \xrightarrow{\div 10} \frac{5}{6}$$

$$28. \frac{10}{20} \xrightarrow{\div 10} \frac{1}{2}$$

$$38. \frac{6}{16} \xrightarrow{\div 2} \frac{3}{8}$$

$$9. \frac{12}{30} \xrightarrow{\div 6} \frac{2}{5}$$

$$19. \frac{10}{45} \xrightarrow{\div 5} \frac{2}{9}$$

$$29. \frac{35}{56} \xrightarrow{\div 7} \frac{5}{8}$$

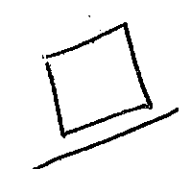
$$39. \frac{24}{42} \xrightarrow{\div 6} \frac{4}{7}$$

$$10. \frac{30}{55} \xrightarrow{\div 5} \frac{6}{11}$$

$$20. \frac{8}{64} \xrightarrow{\div 8} \frac{1}{8}$$

$$30. \frac{4}{8} \xrightarrow{\div 4} \frac{1}{2}$$

$$40. \frac{15}{21} \xrightarrow{\div 3} \frac{5}{7}$$


 40

3-Digit by 2-Digit Multiplication (J) Answers

Name: _____

Date: _____

Score: _____ /20

Calculate each product.

$$\begin{array}{r} 372 \\ \times 43 \\ \hline 1116 \\ 14880 \\ \hline 15996 \end{array}$$

$$\begin{array}{r} 135 \\ \times 58 \\ \hline 1080 \\ 6750 \\ \hline 7830 \end{array}$$

$$\begin{array}{r} 286 \\ \times 92 \\ \hline 572 \\ 25740 \\ \hline 26312 \end{array}$$

$$\begin{array}{r} 525 \\ \times 46 \\ \hline 3150 \\ 21000 \\ \hline 24150 \end{array}$$

$$\begin{array}{r} 508 \\ \times 31 \\ \hline 508 \\ 15240 \\ \hline 15748 \end{array}$$

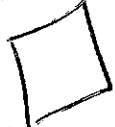
$$\begin{array}{r} 481 \\ \times 78 \\ \hline 3848 \\ 33670 \\ \hline 37518 \end{array}$$

$$\begin{array}{r} 983 \\ \times 36 \\ \hline 5898 \\ 29490 \\ \hline 35388 \end{array}$$

$$\begin{array}{r} 821 \\ \times 88 \\ \hline 6568 \\ 65680 \\ \hline 72248 \end{array}$$

$$\begin{array}{r} 968 \\ \times 13 \\ \hline 2904 \\ 9680 \\ \hline 12584 \end{array}$$

$$\begin{array}{r} 508 \\ \times 74 \\ \hline 2032 \\ 35560 \\ \hline 37592 \end{array}$$


/10

Adding and Subtracting Two Fractions (A) Answers

Name: _____

Date: _____

Score: _____

Calculate each result.

$$1. \quad \frac{34}{10} - \frac{4}{5} = \frac{34}{10} - \frac{8}{10} = \frac{26}{10} = \frac{13}{5} = 2\frac{3}{5}$$

$$2. \quad \frac{40}{14} - \frac{1}{2} = \frac{40}{14} - \frac{7}{14} = \frac{33}{14} = 2\frac{5}{14}$$

$$3. \quad \frac{13}{6} + \frac{53}{18} = \frac{39}{18} + \frac{53}{18} = \frac{92}{18} = \frac{46}{9} = 5\frac{1}{9}$$

$$4. \quad \frac{1}{3} + \frac{9}{6} = \frac{2}{6} + \frac{9}{6} = \frac{11}{6} = 1\frac{5}{6}$$

$$5. \quad \frac{5}{3} - \frac{6}{18} = \frac{30}{18} - \frac{6}{18} = \frac{24}{18} = \frac{4}{3} = 1\frac{1}{3}$$

$$6. \quad \frac{14}{4} - \frac{7}{8} = \frac{28}{8} - \frac{7}{8} = \frac{21}{8} = 2\frac{5}{8}$$

$$7. \quad \frac{19}{5} + \frac{7}{10} = \frac{38}{10} + \frac{7}{10} = \frac{45}{10} = \frac{9}{2} = 4\frac{1}{2}$$

$$8. \quad \frac{7}{4} + \frac{6}{8} = \frac{14}{8} + \frac{6}{8} = \frac{20}{8} = \frac{5}{2} = 2\frac{1}{2}$$

$$9. \quad \frac{4}{7} + \frac{49}{14} = \frac{8}{14} + \frac{49}{14} = \frac{57}{14} = 4\frac{1}{14}$$

$$10. \quad \frac{5}{3} - \frac{9}{18} = \frac{30}{18} - \frac{9}{18} = \frac{21}{18} = \frac{7}{6} = 1\frac{1}{6}$$





Answers included



MIXED PRACTICE

> This Mixed Practice worksheet includes two sections: Spaced Review and End-of-Topic Review.

MODULE 1
Transforming Geometric Objects

TOPIC 1
Rigid Motion Transformations

TOPIC 2
Dilations

TOPIC 3
Line and Angle Relationships

Spaced Review

> Practice concepts from previous topics.

1 Determine each sum or difference.

a $-14 + 25$

11

b $-15 - 3.5$

-18.5

3 Evaluate each expression.

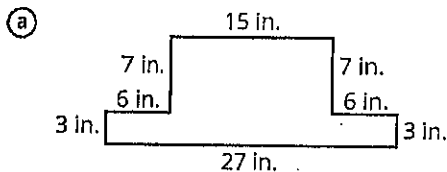
a $-10 + 3(-8)$

-34

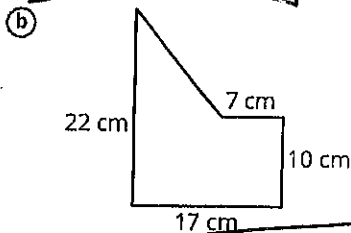
b $-4(-12)$

16

5 Calculate the area of each figure.



186 square inches



230 square centimeters

2 Rewrite each expression.

a $2(x + 4) - 3(x - 5)$

$-x + 23$

b $(4\frac{1}{2}x - 3) + (-2 + 1\frac{3}{4}x)$

$6\frac{1}{4}x - 5$

4 Calculate each product or quotient.

a $\frac{-24.6}{-6}$

4.1

b $4.3(-2.1)$

-9.03

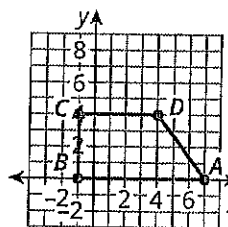
6 Plot each point on the coordinate plane. Connect the points and identify the shape.

A (7, 0)

B (-1, 0)

C (-1, 4)

D (4, 4)



Trapezoid

4 points plotted correctly



Adding, Subtracting, Multiplying and Dividing Integers (F) Answers

Name: _____

Date: _____

Score: _____

Calculate each sum, difference, product or quotient.

$$(+11) \times (-11) = (-121)$$

$$(-11) + (-2) = (-13)$$

$$(-3) + (-11) = (-14)$$

$$(-12) + (+6) = (-6)$$

$$(+8) - (-3) = (+11)$$

$$(+10) \times (+2) = (+20)$$

$$(+4) + (+10) = (+14)$$

$$(+12) + (+10) = (+22)$$

$$(-48) \div (-4) = (+12)$$

$$(+10) + (-9) = (+1)$$

$$(+1) \times (-8) = (-8)$$

$$(-10) - (-10) = (0)$$

$$(+5) \times (+9) = (+45)$$

$$(+12) \times (-9) = (-108)$$

$$(+2) - (+10) = (-8)$$

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

$$(+2) - (-12) = (+14)$$

$$(+40) \div (+5) = (+8)$$

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

$$(+11) \times (-4) = (-44)$$

$$(-9) + (+12) = (+3)$$

$$(-8) + (-7) = (-15)$$

$$(+18) \div (-9) = (-2)$$

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

$$(-9) \times (+10) = (-90)$$

$$(-36) \div (+9) = (-4)$$

$$(-5) - (+6) = (-11)$$

$$(-9) + (+6) = (-3)$$

$$(+21) \div (+3) = (+7)$$

$$(-4) + (-3) = (-7)$$

$$(+120) \div (-12) = (-10)$$

$$(+11) \times (+6) = (+66)$$

$$(+1) + (+10) = (+11)$$

$$(-4) \times (+7) = (-28)$$

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

$$(-36) \div (-3) = (+12)$$

$$(-144) \div (+12) = (-12)$$

$$(+12) + (-2) = (+10)$$

$$(+9) - (+9) = (0)$$

$$(+96) \div (+8) = (+12)$$

$$(+1) \times (-11) = (-11)$$

$$(-11) + (-7) = (-18)$$

$$(-6) \times (-4) = (+24)$$

$$(-11) \times (+3) = (-33)$$

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

$$(+66) \div (+11) = (+6)$$

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

$$(-3) \times (-10) = (+30)$$

$$(+7) \times (+7) = (+49)$$

$$(+7) + (+11) = (+18)$$

□
100

TOPIC 3 PROPORTIONAL RELATIONSHIPS
STANDARDIZED TEST

Name _____ Date _____

1 Your restaurant bill is \$72.34. You want to leave about a 20% tip. Which is the best estimate of a 20% tip?

- a. \$14.00
- ★b. \$14.40
- c. \$14.60
- d. \$14.70

2 The \$199.99 digital camera Anne purchased was on sale for 15% off. What amount did Anne get off the price?

- a. \$15
- b. \$20
- ★c. \$30
- d. \$40

3 Mrs. Jones sells houses. She gets a 5% commission on all sales. How much commission would she earn on a house that sells for \$200,000?

- a. \$5000
- ★b. \$10,000
- c. \$50,000
- d. \$100,000

4 A company spends 13% of its monthly budget on rent, which totals \$2600. Which proportion can be used to calculate the company's total monthly budget?

- a. $\frac{100}{x} = \frac{2600}{13}$
- b. $\frac{x}{100} = \frac{13}{2600}$
- c. $\frac{13}{100} = \frac{x}{2600}$
- ★d. $\frac{13}{100} = \frac{2600}{x}$

$\frac{\square}{4}$

5. A computer is normally \$550 but is discounted to \$385. What percent of the original price does Mark pay?

a. 16.5%

b. 30%

c. 65%

★d. 70%

6. A store is having a sale with a 25% discount on all merchandise. Which equation represents the relationship between the regular cost of merchandise (r) and the discount received (d)?

★a. $d = 0.25r$

b. $r = 0.25d$

c. $d = 25r$

d. $r = 25d$

7. At Outdoor Adventures Clothing Company, all items are marked up to maximize profit. Life preservers cost \$23 to buy from the manufacturer. They sell for \$35. What is the percent increase on life preservers, to the nearest whole percent?

a. 12%

b. 34%

★c. 52%

d. 66%

8. A sporting goods store displays the following sale sign. What is the constant of proportionality?

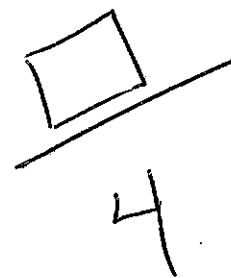
Regular Price (dollars)	Sale Price (dollars)
25	18.75
150	112.50
225	168.75

a. 0.25

b. 0.33

★c. 0.75

d. 1.75

A handwritten fraction consisting of a rectangular box in the numerator and the number 4 in the denominator, separated by a horizontal line.

9 One year ago, Ken bought a mountain bike for \$460. His bike has depreciated since he bought it. It is now worth \$320. What percent did the value of Ken's bike depreciate over the past year, to the nearest whole percent?

- ★a. 30%
- b. 44%
- c. 70%
- d. 140%

11 An office supply store carries an all-in-one printer with a regular price of \$240. The printer is on sale at 15% off. In addition, the store is offering a \$20 mail-in rebate. How much will it cost a customer to purchase this printer, including 5% sales tax on the in-store purchase price?

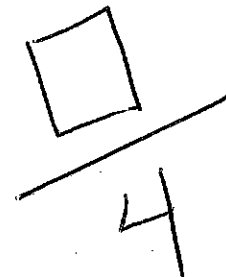
- ★a. \$194.20
- b. \$232.00
- c. \$193.20
- d. \$184.00

10 Luke bought a pair of jeans originally priced at \$69.00. The jeans have been marked down 25%, and a sign posted on the rack where he found them says, "10% additional discount given at register." Which calculation will give the price that Luke will pay for the jeans, not including sales tax?

- a. $69(0.35)$
- b. (0.65)
- ★c. $69(0.75)(0.90)$
- d. $69(0.25)(0.10)$

12 A set of wireless headphones is regularly priced at \$220.00. Akiko purchases them at 25% off of the regular price. How much does Akiko pay?

- a. \$214.50
- b. \$195.00
- ★c. \$165.00
- d. \$55.00



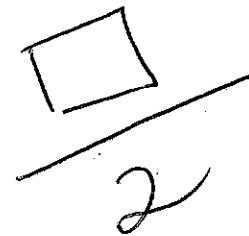
13 The Ricci family's restaurant bill is \$124.00. If they tip their server 20% of the bill, how much is their total bill with the tip included?

- ★a. \$148.80
- b. \$144.00
- c. \$142.60
- d. \$126.48

14 Miguel buys a laptop priced at \$649.99 in one of the four states shown in the table. With tax, the total comes to \$695.49. In which state does Miguel buy the laptop?

State	Sales Tax Rate (%)
California	7.25
Minnesota	6.88
New Jersey	6.63
Tennessee	7.00

- a. California
- b. Minnesota
- c. New Jersey
- ★d. Tennessee



15 An \$80 item is reduced to \$60, then marked back up to \$80. Which statement describes the percent increase and percent decrease?

- a. The percent increase is equal to the percent decrease.
- b. The percent increase is less than the percent decrease.
- ★c. The percent increase is greater than the percent decrease.
- d. The percent increase is 20%.

16 Karen deposits \$375 into a savings account that earns simple interest at a rate of 4% per year. She wants to use the interest to buy a new camera. Which amount could Karen spend on a camera at the end of five years? Select all that apply.

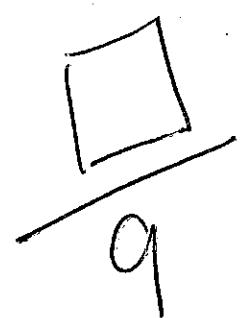
- a. \$764
- ★b. \$52
- ★c. \$38
- ★d. \$75
- e. \$320
- f. \$249

17 Clay has \$60.00. He wants to leave a 20% tip on his restaurant bill. On which bill total could Clay leave a 20% tip? Select all that apply.

- ★a. \$48.53
- ★b. \$49.75
- c. \$54.99
- d. \$61.60
- e. \$58.80
- ★f. \$50.00

18 The sales tax rate in Connecticut is 6.35%. Megan wants to buy a jacket with a \$45.00 price tag. She has a gift card to the store she wants to use. What amount needs to be on the gift card for Megan to be able to buy the jacket using only the gift card? Select all that apply.

- a. \$2.86
- ★b. \$47.86
- c. \$45.00
- d. \$47.70
- e. \$35.29
- ★f. \$48.25



19 Which of the following show a percent increase greater than 50%? Select all that apply.

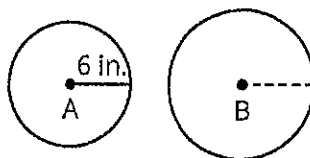
a. A jacket that costs \$18 is sold to the customer for \$25.

b. A hat that costs \$8 is sold to the customer for \$12.

★c. A pair of shoes that costs \$20 is sold to the customer for \$35.

★d. A shirt that costs \$12 is sold to the customer for \$20.

20 Consider the circles shown. Circle A has a radius of 6 inches. Circle B has a radius 20% greater than Circle A.



Which area is greater than or equal to the area of Circle B? Select all that apply.

★a. 189.31 square inches

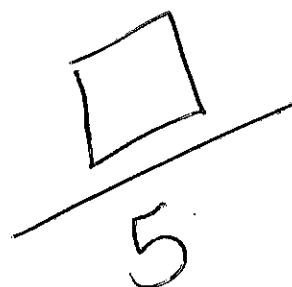
b. 51.84 square inches

c. 113.04 square inches

★d. 162.78 square inches

★e. 203.15 square inches

f. 148.49 square inches



Multiplying Fractions (A)

Name: _____

Date: _____

Score: _____

Calculate each product.

$$1. \quad \frac{1}{2} \times 1\frac{1}{5} = \frac{1}{2} \times \frac{6}{5} = \frac{6}{10} = \frac{3}{5}$$

Convert ↑ Result Simplify

$$2. \quad 1\frac{1}{5} \times \frac{3}{4} = \text{---} \times \text{---} = \text{---} = \text{---}$$

$$3. \quad \frac{2}{7} \times 2\frac{1}{2} = \text{---} \times \text{---} = \text{---} = \text{---}$$

$$4. \quad \frac{1}{2} \times 1\frac{1}{9} = \text{---} \times \text{---} = \text{---} = \text{---}$$

$$5. \quad 2\frac{1}{4} \times \frac{1}{3} = \text{---} \times \text{---} = \text{---} = \text{---}$$

$$6. \quad \frac{1}{3} \times 1\frac{1}{2} = \text{---} \times \text{---} = \text{---} = \text{---}$$

$$7. \quad \frac{2}{9} \times 3\frac{5}{8} = \text{---} \times \text{---} = \text{---} = \text{---}$$

$$8. \quad 1\frac{1}{7} \times \frac{1}{2} = \text{---} \times \text{---} = \text{---} = \text{---}$$

$$9. \quad \frac{2}{7} \times 1\frac{3}{4} = \text{---} \times \text{---} = \text{---} = \text{---}$$

$$10. \quad \frac{1}{7} \times 2\frac{4}{5} = \text{---} \times \text{---} = \text{---} = \text{---}$$

3-Digit by 2-Digit Multiplication (A) Answers

Name: _____

Date: _____

Score: _____ /20

Calculate each product.

$$\begin{array}{r} 435 \\ \times 72 \\ \hline 870 \\ 30450 \\ \hline 31320 \end{array}$$

$$\begin{array}{r} 325 \\ \times 54 \\ \hline 1300 \\ 16250 \\ \hline 17550 \end{array}$$

$$\begin{array}{r} 804 \\ \times 79 \\ \hline 7236 \\ 56280 \\ \hline 63516 \end{array}$$

$$\begin{array}{r} 908 \\ \times 47 \\ \hline 6356 \\ 36320 \\ \hline 42676 \end{array}$$

$$\begin{array}{r} 905 \\ \times 80 \\ \hline 72400 \end{array}$$

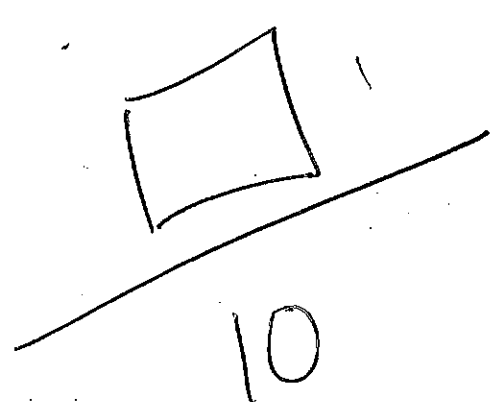
$$\begin{array}{r} 394 \\ \times 71 \\ \hline 394 \\ 27580 \\ \hline 27974 \end{array}$$

$$\begin{array}{r} 977 \\ \times 45 \\ \hline 4885 \\ 39080 \\ \hline 43965 \end{array}$$

$$\begin{array}{r} 256 \\ \times 32 \\ \hline 512 \\ 7680 \\ \hline 8192 \end{array}$$

$$\begin{array}{r} 989 \\ \times 55 \\ \hline 4945 \\ 49450 \\ \hline 54395 \end{array}$$

$$\begin{array}{r} 284 \\ \times 81 \\ \hline 284 \\ 22720 \\ \hline 23004 \end{array}$$



A handwritten mark consisting of a rectangle above a diagonal line, with the number 10 written below the line.

Multiplying Fractions (A) Answers

Name: _____

Date: _____

Score: _____

Calculate each product.

1. $\frac{5}{9} \times \frac{1}{2} = \frac{5}{18}$

11. $\frac{1}{2} \times \frac{3}{4} = \frac{3}{8}$

2. $\frac{2}{9} \times \frac{4}{5} = \frac{8}{45}$

12. $\frac{1}{3} \times \frac{2}{3} = \frac{2}{9}$

3. $\frac{2}{5} \times \frac{3}{5} = \frac{6}{25}$

13. $\frac{3}{7} \times \frac{3}{5} = \frac{9}{35}$

4. $\frac{1}{4} \times \frac{3}{8} = \frac{3}{32}$

14. $\frac{1}{3} \times \frac{1}{5} = \frac{1}{15}$

5. $\frac{1}{2} \times \frac{1}{4} = \frac{1}{8}$

15. $\frac{1}{7} \times \frac{4}{9} = \frac{4}{63}$

6. $\frac{2}{5} \times \frac{2}{3} = \frac{4}{15}$

16. $\frac{1}{3} \times \frac{1}{2} = \frac{1}{6}$

7. $\frac{4}{5} \times \frac{1}{3} = \frac{4}{15}$

17. $\frac{1}{7} \times \frac{1}{2} = \frac{1}{14}$

8. $\frac{5}{6} \times \frac{1}{8} = \frac{5}{48}$

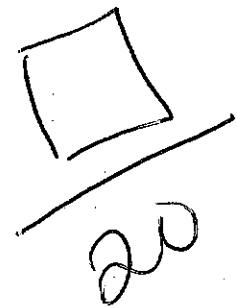
18. $\frac{5}{7} \times \frac{2}{3} = \frac{10}{21}$

9. $\frac{4}{9} \times \frac{2}{3} = \frac{8}{27}$

19. $\frac{5}{7} \times \frac{1}{2} = \frac{5}{14}$

10. $\frac{1}{9} \times \frac{1}{3} = \frac{1}{27}$

20. $\frac{2}{5} \times \frac{2}{7} = \frac{4}{35}$



Operations with Two Mixed Fractions (A) Answers

Name: _____

Date: _____

Score: _____

Calculate each result.

$$1. \quad 5\frac{2}{8} + 1\frac{1}{4} = \frac{42}{8} + \frac{5}{4} = \frac{42}{8} + \frac{10}{8} = \frac{52}{8} = \frac{13}{2} = 6\frac{1}{2}$$

$$2. \quad 5\frac{4}{8} - 1\frac{1}{2} = \frac{44}{8} - \frac{3}{2} = \frac{44}{8} - \frac{12}{8} = \frac{32}{8} = \frac{4}{1} = 4$$

$$3. \quad 5\frac{5}{7} + 2\frac{10}{14} = \frac{40}{7} + \frac{38}{14} = \frac{80}{14} + \frac{38}{14} = \frac{118}{14} = \frac{59}{7} = 8\frac{3}{7}$$

$$4. \quad 5\frac{1}{2} \div 1\frac{7}{10} = \frac{11}{2} \div \frac{17}{10} = \frac{11}{2} \times \frac{10}{17} = \frac{110}{34} = \frac{55}{17} = 3\frac{4}{17}$$

$$5. \quad 5\frac{2}{7} \times 1\frac{3}{6} = \frac{37}{7} \times \frac{9}{6} = \frac{333}{42} = \frac{111}{14} = 7\frac{13}{14}$$

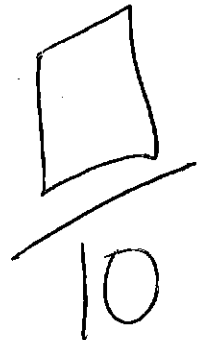
$$6. \quad 5\frac{2}{7} + 2\frac{3}{14} = \frac{37}{7} + \frac{31}{14} = \frac{74}{14} + \frac{31}{14} = \frac{105}{14} = \frac{15}{2} = 7\frac{1}{2}$$

$$7. \quad 5\frac{1}{2} \div 4\frac{13}{18} = \frac{11}{2} \div \frac{85}{18} = \frac{11}{2} \times \frac{18}{85} = \frac{198}{170} = \frac{99}{85} = 1\frac{14}{85}$$

$$8. \quad 5\frac{6}{7} - 1\frac{6}{14} = \frac{41}{7} - \frac{20}{14} = \frac{82}{14} - \frac{20}{14} = \frac{62}{14} = \frac{31}{7} = 4\frac{3}{7}$$

$$9. \quad 1\frac{10}{14} \times 5\frac{1}{5} = \frac{24}{14} \times \frac{26}{5} = \frac{624}{70} = \frac{312}{35} = 8\frac{32}{35}$$

$$10. \quad 1\frac{9}{14} \times 5\frac{1}{3} = \frac{23}{14} \times \frac{16}{3} = \frac{368}{42} = \frac{184}{21} = 8\frac{16}{21}$$



Answers to Volume of Cylinders, Cones and Spheres (ID: 1)

1) $58.7\pi \text{ yd}^3$

5) $600\pi \text{ cm}^3$

9) $33\pi \text{ m}^3$

2) $100\pi \text{ yd}^3$

6) $10.7\pi \text{ km}^3$

10) $486\pi \text{ cm}^3$

3) $682.7\pi \text{ km}^3$

7) $648\pi \text{ cm}^3$

11) $72\pi \text{ cm}^3$

4) $333.4\pi \text{ mi}^3$

8) $36\pi \text{ km}^3$

12) $36\pi \text{ cm}^3$

