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3.1 Practice

For use after Lesson 3.1

Identify the terms and like terms in the expression.

1. $3x + 4 - 7x - 6$ ← These are your terms

3x; 4; -7x; -6

# of terms: 4

Like terms: $3x$ & $-7x$

4 & -6

2. $-9 + 2.5y - 0.7y + 1 + 6.4y^2$ ← This does not have a like term

$-9, -2.5y, -0.7y, +1, -6.4y^2$

# of terms: 5

Like terms: -9 & 1

$2.5y$ & $-0.7y$

Simplify the expression.

3. $(5a - 2a) + 9$

$3a + 9$

4. $m - \frac{1}{6} - 4m + \frac{5}{6}$

$-3m + \frac{4}{6}$ ← reduce

$-3m + \frac{2}{3}$

5. $2.3w - 7 + 8.1 - 3w$

$-0.7w + 1.1$

6. $7(d - 1) + 2$

$7d - 7 + 2$

$7d - 5$

7. $13g + 2(4k - g)$

$13g + 8k - 2g$

$11g + 8k$

8. $20(p + 2) + 16(-3 - p)$

$20p + 40 + (-48 - 16p)$

$20p + 40 - 48 - 16p$

$4p - 8$

9. Write an expression in simplest form that represents the cost for shampooing and cutting w women's hair and m men's hair.

	Women	Men
Cut	\$15	\$7
Shampoo	\$5	\$2

$15w + 5w + 7m + 2m$

$20w + 9m$

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3.2 Practice

For use after Lesson 3.2

Find the sum or difference.

1. $(x - 2) + (x + 6)$

$2x + 4$

2. $(2n - 4) - (4n - 3)$

$-2n - 1$

3. $2(-3y - 1) + (2y + 7)$

$-4y + 5$

4. $(1 - 3k) - 4(2 + 2.5k)$

$-13k - 7$

5. $(6g - 9) + \frac{1}{3}(15 - 9g)$

$3g - 4$

6. $\frac{1}{2}(2r + 4) - \frac{1}{4}(16 - 8r)$

$3r - 2$

7. You earn $(4x + 12)$ points after completing x levels of a video game and then lose $(2x - 5)$ points. Write an expression that represents the total number of points you have now. (In simplest form)

$(4x + 12) - (2x - 5)$

$4x + 12 - 2x + 5$

$2x + 17$

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3.3 Practice

For use after Lesson 3.3

Solve the equation. Check your solution.

1. $y + 12 = -26$

$-12 \quad -12$

$y = -38$

2. $15 + c = -12$

$-15 \quad -15$

$c = -27$

3. $-16 = d + 21$

$-21 \quad -21$

-37

4. $n + 12.8 = -0.3$

$-12.8 \quad -12.8$

-13.1

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

$+4\frac{2}{5} \quad +4\frac{2}{5}$

$g = 5\frac{21}{40}$

6. $-5.47 + k = -14.19$

$+5.47 \quad +5.47$

$k = -8.72$

Write the word sentence as an equation. Then solve.

7. 42 less than x is -50.

$x - 42 = -50$

$+42 \quad +42$

$x = -8$

8. 32 is the sum of a number z and 9.

$32 = z + 9$

$-9 \quad -9$

$z = 23$

9. A clothing company makes a profit of \$2.3 million. This is \$4.1 million more than last year. What was the profit last year?

$2.3 - 4.1 = p$ or $p + 4.1 = 2.3$

$-\$1.8$ million

10. A drop on a wooden roller coaster is $-98\frac{1}{2}$ fe et. A drop on a steel roller coaster is $100\frac{1}{4}$ feet lower than the drop on the wooden roller coaster. What is the drop on the steel roller coaster?

$-198\frac{3}{4}$ ft

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3.4 Practice

For use after Lesson 3.4

Solve the equation. Check your solution.

1. $\frac{d}{5} = -6$

$\cdot 5 \quad \cdot 5$

-30

2. $8x = -6$

$\frac{8x}{8} = \frac{-6}{8}$

$x = -\frac{6}{8}$

$x = -\frac{3}{4}$

3. $-15 = \frac{z}{-2}$

$-2 \cdot \quad \cdot -2$

30

4. $3.2n = -0.8$

$\frac{3.2n}{3.2} = \frac{-0.8}{3.2}$

$n = -0.25$

5. $-\frac{3}{10}h = 15$

$\left(-\frac{10}{3}\right) \quad \cdot -\frac{10}{3}$

$h = \frac{-150}{3}$

$h = -50$

6. $-1.1k = -1.21$

$\frac{-1.1k}{-1.1} = \frac{-1.21}{-1.1}$

$k = 1.1$

Write the word sentence as an equation. Then solve.

7. A number divided by –8 is 7.

$\frac{x}{-8} = 7$

$x = -56$

8. The product of –12 and a number is 60.

$-12x = 60$

$x = -5$

9. You earn \$0.85 for every cup of hot chocolate you sell. How many cups do you need to sell to earn \$55.25?

$0.85c = 55.25$

65 cups

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3.5 Practice

For use after Lesson 3.5

Show all Steps!

Solve the equation. Check your solution.

1. $3a - 5 = -14$

$+5 \quad +5$

$\frac{3a}{3} = \frac{-9}{3}$

$a = -3$

2. $10 = -2c + 22$

$-22 \quad -22$

$\frac{-12}{-2} = \frac{-2c}{-2}$

$c = 6$

3. $18 = -5b - 17$

$+17 \quad +17$

$35 = -5b$

$b = -7$

4. $-12 = -8z + 12$

$-12 \quad -12$

$\frac{-24}{-8} = \frac{-8z}{-8}$

$2 = 3$

5. $1.3n - 0.03 = -9$

$+0.03 \quad +0.03$

$1.3n = -8.97$

$n = -6.9$

6. $-\frac{5}{11}h + \frac{7}{9} = \frac{2}{9}$

$1\frac{2}{9}$

7. The length of a rectangle is 3 meters less than twice its width.

a. Write an equation to find the length of the rectangle.

$l = 2w - 3$

b. The length of the rectangle is 11 meters. What is the width of the rectangle?

$l = 2w - 3$

$11 = 2w - 3$

$+3 \quad +3$

$\frac{14}{2} = \frac{2w}{2}$

$w = 7$ meters