Do Now:
Copy down the word problem. Set up an equation and solve.

One stalacite is 25 centimeters long and is growing at a rate of 1.2 centimeters per year. Another stalacite is 22 centimeters long and is growing at a rate of 1.8 centimeters per year. In how many years will the stalacites be the same length?

Stalacite 1 = Stalacite 2

Clearing Decimals

$25 + 1.2y = 22 + 1.8y$

$250 + 12y = 220 + 18y$

$-12y \quad -12y$

$250 = 220 + 6y$

$-220 \quad -220$

$\frac{30}{6} = \frac{6y}{6}$

$5 = y$

Same length in 5 years

Answers to the Workbook 6.2

1. x = 8	15. k = 3
3. m = 4	17. w = 12
5. y = 6	19. 9 months
7. z = 2	21. $3 each; $153 total
9. h = -7	23. q = 1/5
11. 45 units (x=2)	25. x = -2
13. a = 1	27. j = -2
	10. 54 units (x=2)

(19) Tree One Tree Two

$50 + 2m = 59 + m$

$-m \quad -m$

$50 + m = 59$

$-50 \quad -50$

$m = 9$

9 months

(21) $15 per one dozen ($1.25 per one rose)

$9(15) + 6x = 51x$

$135 + 6x = 51x$

$x = 3$

$3 for an individual rose; $36

$135 + 6x$

$135 + 6(3)$

$135 + 18$

$153

$51x$

$51(3)$

$153

6.3 Solving Equations Involving Fractions and Decimals

7.NS
7.EE

- SWBAT solve equations with fractions and decimals.
- SWBAT represent and analyze situations using algebraic symbols.

Calculators: Yes

A colony of coral is 0.17 meter high and is growing at a rate of 0.025 meter per year. Another colony is 0.11 meter high and is growing at a rate of 0.041 meter per year. In how many years will the colonies be the same height?

$0.170 + 0.025x = 0.110 + 0.041x$

$170 + 25x = 110 + 41x$

$-25x \quad -25x$

$170 = 110 + 16x$

$-110 \quad -110$

$\frac{60}{16} = \frac{16x}{16}$

$\frac{60}{16} = \frac{30}{8} = \frac{15}{4}$

$3.75 = x$

The colonies will be the same height in 3.75 years.

Solving an Equation Involving Decimals

1. Clear the decimals.
2. Solve.

$0.17 + 0.025n = 0.11 + 0.041n$

$39.95 + 4x = 54.95 + 2x$

$3995 + 400x = 5495 + 200x$

$x = 7.5$

$14x - 1.8 + 2.35x = 0.21$

$1400x - 180 + 235x = 21$

$1635x - 180 = 21$

$+180 \quad +180$

$\frac{1635x}{1635} = \frac{201}{1635}$

$x = 0.12$

0.62a - 6.4 + 1.78a = 36

At the deli, Swiss cheese costs $3.96 per pound and turkey costs $4.76 per pound. You buy the same amount of each and spend $13.08. Write and solve an equation to find out how many pounds of each you buy.

Solve the equation.

1. -1.7k + 6.7k = 13.1
2. 1.2n - 0.24 = 0.7n
3. 8.3 - 8y = 1.2y + 6

Exit Pass 6.3

Describe and correct the error in the solution of 1.5x + 0.25 = 1.6x

$$1.5x + 0.25 = 1.6x$$
$$15x + 25 = 16x$$
$$25 = x$$

Reflection of Today's Lesson

6.3 Solving Equations Involving Fractions and Decimals

7.NS
7.EE

- SWBAT solve equations with fractions and decimals.
- SWBAT represent and analyze situations using algebraic symbols.

Calculators: Yes

Homework

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