

Name: KEY

December 17, 2012

Mr. McAusland - 6th Grade Math

Unit 3 Practice Quiz – Sections 1 through 4

- 1) Give two special cases for the general pattern $(2 * x) + x = 3 * m$

$$\underline{(2 * 3) + 3 = 3 * 3}$$

$$\underline{(2 * 5) + 5 = 3 * 5}$$

- 2) Circle the general statement below that describes the special cases:

Special Cases

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

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

$$1.2 + (-0.6) = 1.2 - 0.6$$

- a) $m + n = m - n$ b) $m * n = m / n$ c) $m + (-n) = m - n$ d) $m - n = m - n$

- 3) You can use the formula $A = b * h$ to find the area of a parallelogram when the base and the height are known.

What is the Area of a parallelogram when the height is 2 ft and the base is 5 ft.

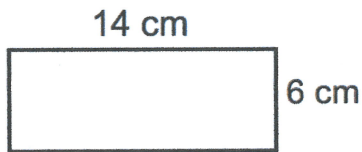
Area = 10 ft²

$$A = b * h$$

$$A = (5 \text{ ft})(2 \text{ ft})$$

$$A = 10 \text{ ft}^2$$

- 4) Use the formula $P = 2 * (b + h)$ to find the perimeter of a rectangle



Perimeter = 40 cm

$$P = 2 * (b + h)$$

$$P = 2 * (14 \text{ cm} + 6 \text{ cm})$$

$$P = 2 * (20 \text{ cm})$$

$$P = 40 \text{ cm}$$

- 5) Rename each fraction as a mixed number or whole number

a) $\frac{30}{7}$ $4\frac{2}{7}$

b) $\frac{41}{4}$ $10\frac{1}{4}$

c) $\frac{50}{5}$ 10

$$\begin{array}{r} 4 \\ 7 \overline{) 30} \\ \underline{28} \\ 2 \end{array}$$

$$\begin{array}{r} 10 \\ 4 \overline{) 41} \\ \underline{40} \\ 1 \end{array}$$

$$\begin{array}{r} 10 \\ 5 \overline{) 50} \\ \underline{50} \\ 0 \end{array}$$

- 6) Rename each mixed number as a fraction

a) $5\frac{3}{4}$ $\frac{23}{4}$

b) $1\frac{2}{11}$ $\frac{13}{11}$

c) $4\frac{5}{6}$ $\frac{29}{6}$

$$\begin{array}{l} 4 \cdot 5 + 3 \\ 20 + 3 \\ 23 \end{array}$$

$$\begin{array}{l} 11 \cdot 1 + 2 \\ 11 + 2 \\ 13 \end{array}$$

$$\begin{array}{l} 6 \cdot 4 + 5 \\ 24 + 5 \\ 29 \end{array}$$

- 7) Write a general pattern for the special cases

$$\frac{A}{B} = \frac{A \cdot 4}{B \cdot 4}$$

$$\frac{1}{2} = \frac{1 \cdot 4}{2 \cdot 4}$$

$$\frac{3}{4} = \frac{3 \cdot 4}{4 \cdot 4}$$

$$\frac{5}{6} = \frac{5 \cdot 4}{6 \cdot 4}$$

- 8) Write an algebraic expression for the situation. Use the suggested variable.

Peter had m Marshmallows for dessert. If Thomas has 9 fewer Marshmallows than Peter, how many Marshmallows does Thomas have?

$$m - 9$$

- 9) First translate each situation from words into an algebraic expression. Then solve the problem that follows.

a) The height of a triangle is twice the base. If the base of the triangle is b inches, what's the height of the triangle?

$$2b$$

b) If the base of the triangle is 4 inches, what is the height of the base?

$$2(4 \text{ in})$$

The height is 8 in

10) Give an algebraic ~~expression~~ ^{FORMULA} for the "What's My Rule?"

$$\underline{A = 2B \text{ OR } B = \frac{A}{2}}$$

a	b
4	2
8	4
10	5
13	6.5