Grade 7

Student Name: _____

Equations

1. Solve.

a. 35 + 15 × 2 ÷ 5 = _____

$= 35 + 30 \div 5$

$= 35 + 6$

$= 41$

b. (50 ÷ (2 + 3) -2) × 7 = _____

$= (50 \div 5 - 2) \times 7$

$= (10 - 2) \times 7$

$= 8 \times 7$

$= 56$

2. Solve for x.

a. $\frac{x}{2} = 5$, x = _____

$2 \times \frac{x}{2} = 2 \times 5$

$x = 10$

b. 2x + 3 = 25, x = _____

$2x + 3 - 3 = 25 - 3$

$2x = 22$

$\frac{2x}{2} = \frac{22}{2}$

$x = 11$

Multiplication, Division, Exponents and Squares

1. Multiply.

a.
```
 4324
 x 125
 21620
 86480
432400
540500
```

b.
```
 3.375
 x  2.4
 13500
 67500
 8.1000
```

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Divide.

a. 23.52 ÷ 6 = **3.92** b. 6474 ÷ 26 = **249**

2. Solve.

a. 4^3 = _____
$= 4 \times 4 \times 4$
$= 64$

b. $\sqrt{81} = \pm\mathbf{9}$

Solving Problems

1. Maria charges $15 for 3 hours of babysitting.
   a. What is Maria's rate per hour?

$RpH = \$15 \div 3 = \$5$

   b. How much does Maria charge for 5 hours of babysitting?

$= RpH \times 5 = \$5 \times 5 = \$25$

   c. How many hours would Maria have to babysit to earn $50?

$= \$50 \div RpH = \$50 \div \$5 = 10$

Fractions

1. Add.

a. $\frac{3}{8} + \frac{1}{2} + \frac{1}{4} =$

$= \frac{3}{8} + \frac{4}{8} + \frac{2}{8}$

$= \frac{9}{8} = 1\frac{1}{8}$

b. $7\frac{1}{9} + 3\frac{1}{6} =$

$= \frac{64}{9} + \frac{19}{6}$

$= \frac{128}{18} + \frac{57}{18}$

$= \frac{185}{18} = 10\frac{5}{18}$

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2. Subtract.

a. $\frac{11}{6} - \frac{1}{3} =$

$= \frac{11}{6} - \frac{2}{6}$

$= \frac{9}{6} = \frac{3}{2} = 1\frac{1}{2}$

b. $1 - \frac{5}{8} =$

$= \frac{8}{8} - \frac{5}{8}$

$= \frac{3}{8}$

<u>Surface Area and Volume</u>

1. Calculate the surface area and volume.

a. Area = _____

$= 2(l \times h) + 2(l \times w) + 2(h \times w)$

$= 2(4 \times 2) + 2(4 \times 1) + 2(2 \times 1)$

$= 2(8) + 2(4) + 2(2)$

$= 16 + 8 + 4$

$= 28\ cm^2$

b. Volume = _____

$= l \times w \times h$

$= 4 \times 1 \times 2$

$= 8\ cm^3$