Are You Ready For MTH 60?

Below are some of the skills you should have BEFORE entering MTH 60.

Do not use a calculator.

1) $5 - 3(5 + 3 * 3^2) =$

2) $2 + \frac{4+3*2}{2} =$

3) $-3 + 2 + \sqrt{36} - 2^3 =$

4) $\frac{1}{4} + \frac{1}{6} - \left(\frac{2}{3}\right) =$

5) 1.6(3) - .12=

6) Solve for x: $\frac{7}{9} = \frac{10}{x}$

7) $2\frac{3}{5} - \frac{7}{10} =$

8) $\frac{5}{8} \div \left(-\frac{5}{4}\right) =$

9) Write 15% as a fraction (lowest terms) and a decimal

10) What number is 35% of 60?

11) Write the prime factorization of 24 using exponents.

12) Find the sale price for a $85 sweater that is 30% off.

13) If a car travels at 55 miles per hour, how long will it take to drive 300 miles?

14) This week the sale price of a car is $8000. Last week it was $10000. What is the percent of decrease?

15) Jane finds five cool rocks on the beach every 50 hours she looks. About how many rocks would she find if she walked a total of 40 hours?

SOLUTIONS

RU Ready 4 MTH60?

① $5-3(5+3\cdot3^2)$

$5-3(5+3\cdot9)$

$5-3(5+27)$

$5-3(32)$

$5-96$

$\boxed{-91}$

② $2+\frac{4+3\cdot2}{2}$

$2+\frac{4+6}{2}$

$2+\frac{10}{2}$

$2+5=\boxed{7}$

③ $-3+2+\sqrt{36}-2^3$

$-3+2+6-8$

$\boxed{-3}$

④ $\frac{1^{x3}}{4^{x3}}+\frac{1^{x2}}{6^{x2}}-\frac{2^{x4}}{3^{x4}}$

$\frac{3}{12}+\frac{2}{12}-\frac{8}{12}=\frac{-3}{12}=\boxed{\frac{-1}{4}}$

⑤ $1.6(3)-.12$

$1.6 \times 3 = 4.8$

$4.8^{7}0 - .12 = \boxed{4.68}$

⑥ $\frac{7}{9}=\frac{10}{x}$

$7x=90$

$\boxed{x=\frac{90}{7} \text{ OR } 12\frac{6}{7}}$

$7\overline{)90}$ 12, 7, 20, 14, 6

⑦ $2\frac{3^{x2}}{5^{x2}}-\frac{7}{10}$

$2\frac{6}{10}-\frac{7}{10}$

$\frac{26}{10}-\frac{7}{10}=\boxed{\frac{19}{10} \text{ OR } 1\frac{9}{10}}$

⑧ $\frac{5}{8}\div\left(\frac{-5}{4}\right)$

$\frac{5}{8}\cdot\left(\frac{-4}{5}\right)=\boxed{\frac{-1}{2}}$

⑨ $15\% = \frac{15}{100} \overset{\div5}{=} \boxed{\frac{3}{20}}$

$15\% = \boxed{.15}$

SOLUTIONS

(10) 35% of 60

$(.35)(60)$

$.35 \times 60 = 21.00$

$= 21$

(11) 24

2×12

2×6

2×3

$2^3 \times 3$

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(12) $85, 30% off

$85 - 30\% \text{ of } 85$

$85 - (.3)(85)$

$85 - 25.50$

$59.50

OR

$85 (70%)

$85 \times .7 = 59.5$

on $59.50

$85 \times .3 = 25.5$

$85.00 - 25.50 = 59.50$

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(13) 55 mph / 300 miles?

$\frac{55 \text{ mi}}{1 \text{ hr}} = \frac{300 \text{ mi}}{x \text{ hr}}?$

$\frac{300}{55} = \frac{55x}{55}$

$55 \overline{)300}$, 275, 25, $5\frac{25}{55}$

$5\frac{5}{11}$

$x = 5\frac{5}{11}$ hrs.

(about $5\frac{1}{2}$ hrs)

(14) $10,000 - 8,000$

down 2000

used to be 10,000

$\frac{2000}{10,000} = \frac{1}{5} =$ 20% decrease

(15) $\frac{5}{50} = \frac{x}{40}$

$200 = 50x$

$x = 4$