

Math I - Section 1.1-1.5 Review #1

Good Luck!

Simplify:

1. $\overbrace{-(-18p+9r)}$
 $18p - 9r$

2. $\overbrace{8(5x-3)}$
 $8(5x) - 8(3)$
 $40x - 24$

1. $18p - 9r$

2. $40x - 24$

3. $9p^2$

3. $17p^2 - 8p^2$ only subtract coefficients for like terms!
 $17 - 8 = 9$ $9p^2$

Solve:

4. $6x - 1x + 6 = 41$

$5x + 6 = 41$
 $-6 \quad -6$

$5x = 35$
 $\frac{5x}{5} = \frac{35}{5}$ $x = 7$

5. $9x + 12 = 6x + 7$

$-6x \quad -6x$
 $3x + 12 = 7$
 $-12 \quad -12$

$3x = -5$
 $\frac{3x}{3} = \frac{-5}{3}$ $x = -\frac{5}{3}$

4. $x = 7$

5. $x = -\frac{5}{3}$

6. $5(x+16) = 13x$

$5x + 80 = 13x$
 $-5x \quad -5x$

$80 = 8x$
 $\frac{80}{8} = \frac{8x}{8}$
 $10 = x$

7. $\frac{2}{9}x + 4 = 12$

$-4 \quad -4$

$\frac{2}{9}x = 8$
 $\frac{2/9 x}{2/9} = \frac{8}{2/9}$

$x = 36$

6. $x = 10$

7. $x = 36$

Multiple Choice

8. $7(x-3) + 2 = -5$

$7x - 21 + 2 = -5$

$7x - 19 = -5$
 $+19 \quad +19$

$7x = 14$

$7x = 14$
 $\frac{7x}{7} = \frac{14}{7}$

$x = 2$

- a.) -4 **b.) 2** c.) -2 d.) 4

8. B

9.) You received a \$15.00 credit for a website that sells movie and music files. A movie cost \$1.90 to download and a song cost \$.70. The equation $1.90m + 0.7s = 15.00$ where m is the number of movies and s is the number of songs, models the situation. How many songs can you download if you download 3 movies?

$1.90(3) + 0.7s = 15.00$

$5.7 + 0.7s = 15.00$
 $-5.7 \quad -5.7$

$0.7s = 9.3$

$\frac{0.7s}{0.7} = \frac{9.3}{0.7}$

$s = 13.29 \rightarrow 13 \text{ songs}$

ALWAYS SHOW YOUR WORK

9. 13 songs

Solve for Unit Rate:

10. At an automobile factory, 2450 parts are made in 5 hours. What is the average rate at which parts are made per hour? **SHOW YOUR WORK**

a.) 523 parts/h

b.) 489 parts/h

c.) 490 parts/h

d.) 502 parts/h

$$\frac{2450 \text{ parts}}{5 \text{ hours}} = \frac{490 \text{ parts}}{1 \text{ hour}}$$

10. C

11. You are shopping for jeans. Jeans R US sells 3 pairs of jeans for \$78.99. Denim Warehouse sells 4 pairs of jeans for \$95. New Trends sells 5 pairs of jeans for \$125. Which store has the best deal?

SHOW YOUR WORK to justify your answer.

Jeans R US
 $78.99 \div 3 =$
\$26.33/pair

Denim Warehouse
 $95 \div 4 =$
\$23.75/pair

New Trend
 $125 \div 5 =$
\$25/pair

11. Denim Warehouse

Conversions:

12. 87 in = 7.25 ft

$$87 \text{ in} \left(\frac{1 \text{ ft}}{12 \text{ in}} \right) = 7.25 \text{ ft}$$

12. 7.25

13. 8 days = 192 hrs

$$8 \text{ days} \left(\frac{24 \text{ hrs}}{1 \text{ day}} \right) = 192 \text{ hrs}$$

13. 192

14. 558 sec = 9.3 min

$$558 \text{ sec} \left(\frac{1 \text{ min}}{60 \text{ sec}} \right) = 9.3 \text{ min}$$

14. 9.3

15. 134 cm = 1.34 m

$$134 \text{ cm} \left(\frac{1 \text{ m}}{100 \text{ cm}} \right) = 1.34 \text{ m}$$

15. 1.34

Remember:
1 day = 24 hours
1 foot = 12 inches
1 minute = 60 seconds
1 meter = 100 centimeters