Name _____

Score _____

Math Course 3
Also take Power-Up Test 6

1. The minute hand of a clock turns
(18) 6° per minute. In ten minutes the
minute hand turns what fraction of
a full 360° turn?

2. A 20% tip on a $24.00 dinner bill is
(11) how much money?

3. Postage costs 39¢ for the first
(3, 4) ounce and 24¢ for each additional
ounce. What is the cost to mail a
6-ounce envelope?

4. During the morning commute
(25) 96 cars and 24 trucks passed
through the intersection. What is
the ratio of cars to trucks?

5. What is the total price of 3.2 pounds
(25) of apples at 80¢ per pound?

6. A tile installer charges $12 per
(4, 8) square foot to install floor tile. What
is the cost to install tile in a room of
the size shown?

4 ft
4 ft
8 ft
6 ft
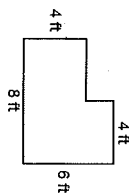
7. At $32 per hour, how much would a
(4, 5) worker earn on a $2\frac{1}{2}$ hour job?

Refer to the triangle for questions 8 and 9.
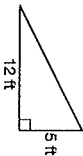
8. What is the perimeter of the
(Inv. 2) triangle?

12 ft
5 ft

9. The triangle is a right triangle. It is
(20) also

A. left

B. equilateral

C. isosceles

D. scalene

10. What is the area of a triangle with
(Inv. 1, 20) vertices at (−1, −1), (3, −1), and (2, 2).

11. Write 40% as a decimal number
(11, 12) and as a reduced fraction.

12. Convert $\frac{5}{6}$ to a decimal with a bar
(20) over the repetend.

13. Earth's average distance from the
(28) Sun is about 93,000,000 miles.
Express that number in scientific
notation.

14. Triangle ABC is transformed to
(26) triangle A'B'C' by a
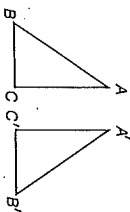
A. translation

B. rotation

C. reflection

D. dilation

B
C C'
A'
A
B'

15. Find the missing exponent:
(27) $10^4 \cdot 10^5 = 10^{\square}$

16. Solve by inspection: $\frac{t + 2}{3} = 4$
(19, 14)

For questions 17–20, simplify the
expression.

17. $\frac{1}{2} + \frac{1}{3} \cdot \frac{1}{4}$
(13, 22)

18. $\dfrac{1.2 + 0.36}{0.06}$
(24, 25)

19. $5^0 + 4 - 3 \cdot 2 + 1$
(21, 27)

20. $\dfrac{x^3 \cdot x^4}{x^5}$
(15, 27)

1. $6°$ per minute
10 minutes = $10 \times 6 = 60°$
$\frac{60°}{360°} = \div 60 = \boxed{\frac{1}{6}}$

2. 20% of $24.
20% of 24
$20 \xleftarrow{\text{mult}} 100 \xrightarrow{\text{DIVIDE}}$
$24 \div 100 = .24$
$.24 \times 20 = \boxed{\$4.80}$

3. 34¢ first oz. $\xleftarrow{\text{6 ounces}}$ 24¢ additional oz.
$34 + 24 + 24 + 24 + 24 + 24 = \boxed{\$1.35}$

4. Cars to trucks
$\frac{96 \text{ to } 24}{}$
$\frac{96}{24} \div 24 = \frac{4}{1}$ or $\boxed{4 \text{ to } 1}$

5. 3.2 lbs @ .80 per lb.
$3.2 \times .80$
$\frac{2560}{} = \boxed{\$2.56}$

6. 4' 2' 6'
$\xleftarrow{}$ $8'$ 4'
$4 \times 4 = 16 \text{ ft}^2$
$4 \times 6 = 24 \text{ ft}^2$
$16 + 24 = 40 \text{ ft}^2$
$\$12 \times 40 = \boxed{\$480}$

7. $32 per hr for $2\frac{1}{2}$ hrs
$32 \times 2.5 = \boxed{\$80}$

8. x 4' 12' 5'
$a^2 + b^2 = c^2$
$12^2 + 5^2 = c^2$
$144 + 25 = c^2$
$169 = c^2$
$\sqrt{169} = 13$
$P = 12 + 5 + 13 = \boxed{30 \text{ ft}}$

9. D. Scalene (all sides different)

10.

$A = (b \cdot h) \div 2$
$A = (3 \cdot 4) \div 2$
$A = 12 \div 2$
$\boxed{A = 6 \text{ units}^2}$

11. D. Scalene (all sides different)

12. $\frac{5}{6}$ to decimal
$5 \div 6 = 0.8333333$
$= \boxed{0.8\overline{3}}$

13. 93,000,000
$\boxed{9.3 \times 10^7 \text{ miles}}$

14. C Reflection

15. $10^4 \cdot 10^5 = .10^?$
$(10 \cdot 10 \cdot 10 \cdot 10) \cdot (10 \cdot 10 \cdot 10 \cdot 10 \cdot 10)$
$4 + 5 = \boxed{9}$

16. 40% as decimal = $\boxed{0.4}$
40% as fraction = $\frac{40}{100} \div 20 = \boxed{\frac{2}{5}}$

17. $\frac{t+2}{3} = \frac{12}{3} = 4$
$t = 10$
$\boxed{4}$

18. $\frac{1}{2} + \left(\frac{1}{3} \cdot \frac{1}{4}\right)$
$\frac{1}{2} \times \frac{6}{6} = \frac{6}{12}$
$\frac{1}{12}$
$\frac{6}{12} + \frac{1}{12} = \boxed{\frac{7}{12}}$

19. $1.2 + 0.36$
0.06
$\frac{1.2 + 0.36}{0.06} = \frac{1.56}{0.06} = \boxed{26}$

20. $5^0 + 4 - 3 \cdot 2 + 1$
$1 + 4 - (3 \cdot 2) + 1$
$\boxed{1 + 4} - 6 + 1$
$\boxed{5 - 6} + 1$
$-1 + 1 = \boxed{0}$

21. $\frac{x^3 \cdot x^4}{x^5}$
$\frac{(x \cdot x \cdot x)(x \cdot x \cdot x \cdot x)}{x \cdot x \cdot x \cdot x \cdot x} = \boxed{x^2}$