

**LEVEL: EMERGING**

Directions: Translate the verbal phrase into an algebraic expression.

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| 1) 7 less than 4 times a number, $n$ | 2) The quotient of a number $n$ squared and 15 | 3) Twice a number $n$ subtracted from eleven |
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Directions: Write an expression for the situation.

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| 4) The number of minutes left in a school period if $m$ minutes have passed. (Assume it's a 45 minute period) | 5) The total amount of money spent if you spent $d$ dollars at one store and $f$ dollars at the next. | 6) How much you would spend if tickets to the Bears game cost \$79.95 and $n$ friends bought tickets? |
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Directions: Find the unit rate.

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| 7) $\frac{45 \text{ students}}{3 \text{ classes}}$ | 8) $\frac{8 \text{ cups}}{2 \text{ servings}}$ | 9) $\frac{27 \text{ dollars}}{4 \text{ hours}}$ |
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**LEVEL: PROFICIENT**

Directions: Translate the verbal phrase into an algebraic expression.

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| 10) The product of 15 and 3 more than a number $b$ | 11) Twice a number minus the quotient of 20, and 4 less than a number $n$ | 12) The sum of 5 and a number $n$ cubed, divided by 10 |
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| 13) The length of a football field is 30 yards more than its width. Write an expression that describes the length in terms of its width, $w$ . | 14) Your cell phone plan costs \$50 a month plus an extra 20 cents per text, $t$ . Write an expression that models the total monthly cost. |
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| 15) Does the following expression match the verbal phrase "4 less than 6 times a number"? If not, describe why and write the correct expression. | 16) A 48 oz. container of juice costs \$2.64. What is the cost per oz. of juice? |
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" $4 - 6n$ "

**LEVEL: MASTERY**

Directions: Translate the verbal phrase into an algebraic expression.

17) 9 less than three times the sum of  $j$  and  $k$ , all divided by 6.

18) 2 more than 3 times the difference of  $h$  and 5

19) One third of the sum of 6 and  $s$ , plus the product of 8 and  $b$

20) Which expression represents the phrase "twice the quotient of 50 and the sum of a number  $y$  and 8"?

a)  $\frac{2 \cdot 50}{y} + 8$

b)  $2 \left( \frac{50+y}{8} \right)$

c)  $2 \left( \frac{50}{y+8} \right)$

d)  $\frac{2}{50} + (y + 8)$

21) Which rate is greater? Show all of your work!

a) \$1.60 for five minutes

b) \$19.50 for 1 hour

Answer: \_\_\_\_\_

22) Your printer takes 60 seconds for a large photo and 25 seconds for a small photo.

a. Write an expression that describes how many total seconds it would take to print  $x$  small photos and  $y$  large photos.

\_\_\_\_\_

b. If you printed 13 small photos and 8 large photos, how many seconds would it take?

23) Write an algebraic expression for the phrases "4 subtracted by a number" and "4 subtracted from a number". Explain the difference between these two phrases.

Phrase 1: \_\_\_\_\_

Phrase 2: \_\_\_\_\_

Explanation: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Worksheet 1.4A Answers

1)  $4n - 7$

2)  $\frac{n^2}{15}$

3)  $11 - 2n$

4)  $45 - m$

5)  $d + f$

6)  $79.95 \cdot n$

7)  $\frac{15 \text{ students}}{1 \text{ class}}$

8)  $\frac{4 \text{ cups}}{1 \text{ serving}}$

9)  $\frac{6.75 \text{ dollars}}{1 \text{ hour}}$

10)  $15(b + 3)$

11)  $2n - \frac{20}{n-4}$

12)  $\frac{5+n^3}{10}$

13)  $w + 30$

14)  $50 + 0.2t$

15) NO , answers may vary

16)  $\frac{\$0.06}{1 \text{ oz}}$

17)  $\frac{3(j+k)-9}{6}$

18)  $3(h - 5) + 2$

19)  $\frac{1}{3}(6 + s) + 8b$

20) C

21) B

22) a)  $60y + 25x$  b) 805 sec

23) Answers may vary