## MMS7Ch6MURQuiz

Name: $\qquad$

## Multiple Choice

Identify the choice that best completes the statement or answers the question.
$\qquad$ 1. Which are expressions?

P: $\frac{x}{8}-5=5$
Q: $11-4 x$
R: $4 x-8=0$
S: $\frac{9-x}{4}+7$
a. Q and S
b. P and R
c. R and S
d. P and Q
$\qquad$ 2. Which are equations?

P: $10-5 x=2$
Q: $3 x+9$
R: $\frac{x}{4}-3$
S: $\frac{x-3}{4}=3$
a. $P$ and $S$
b. P and Q
c. R and S
d. Q and R
$\qquad$ 3. Solve this equation: $q \div 6=6$
a. 36
b. 12
c. 42
d. 38
$\qquad$ 4. Solve this equation: $\frac{c}{11}=5$
a. 55
b. 50
c. 16
d. 6
$\qquad$ 5. Shaun saved $\$ 12.00$ from his paycheck. This was half the amount of money he had earned. How much money did Shaun earn?
a. $\quad \$ 24.00$
b. $\$ 21.50$
c. $\$ 12.00$
d. $\$ 26.00$
$\qquad$ 6. Write an equation for this sentence. Then solve the equation.

Seven more than a number is 14 .
a. $x+7=14, x=7$
b. $x+7=14, x=2$
c. $7 x=14, x=7$
d. $7 x=14, x=2$
$\qquad$ 7. Write an equation for this sentence. Then solve the equation.

A number multiplied by 4 is 12 .
a. $4 x=12, x=3$
b. $x+4=12, x=8$
c. $4 x=12, x=8$
d. $4+x=12, x=3$
$\qquad$ 8. Janet bought 18 DVDs for $\$ 252$. Write an equation you could use to find the cost of each DVD.
a. $C=\frac{252}{18}$
b. $C=252-18$
c. $C=\frac{18}{252}$
d. $C=18 \times 14$
$\qquad$ 9. Solve this equation: $h+4=13$
a. 9
b. 17
c. 5
d. 6
10. Solve this equation: $n+12=25$
a. 13
b. 20
c. 37
d. 11
11. The 2 pans of the scales are balanced. Find the value of the unknown mass $A$.

a. 3 g
b. $\quad 14 \mathrm{~g}$
c. 48 g
d. 7 g
12. The 2 pans of the scales are balanced. Find the value of the unknown mass B.

a. $\quad 13 \mathrm{~g}$
b. 5 g
c. 11 g
d. 47 g
13. Solve this equation: $5+11=y+8$
a. 8
b. 47
c. 7
d. 53
14. Solve this equation: $v+v+7=6+4$
a. 1.5
b. 8.5
c. 3
d. 2
15. Solve this equation: $4 z+32=44$
a. 3
b. 19
c. 8
d. 72
16. Write an equation for this sentence. Then solve the equation.

Five more than a number is 15 .
a. $x+5=15, x=10$
b. $5 x=15, x=10$
c. $x+5=15, x=3$
d. $5 x=15, x=3$
$\qquad$ 17. A 2-pan balance has a mass of 8 g and a mass of 4 g on the left pan, and an unknown mass and a mass of 7 g on the right pan. What is the value of the unknown mass if the 2 pans are balanced?
a. 5 g
b. 3 g
c. 11 g
d. 2 g
18. The area of this rectangle is given by the formula $A=l \times h$.

Find the length $l$ of the rectangle.

a. 8 cm
b. 42 cm
c. 288 cm
d. 41 cm
19.
$\square$ This tile represents $x$.
This tile represents +1 .
Identify the tiles that model $2 x+4$.
a.

c.
b.

d.

20. $\qquad$ This tile represents $x$.
$\square$ This tile represents +1 .
Identify the tiles that model $3 x+6$.
a.

c.

b.

d.

21. Solve this equation: $x+2=6$
a. 4
b. 8
c. 12
d. 3
22. Solve this equation: $x-5=10$
a. 15
b. 5
c. 8
d. 2
23. Solve this equation: $-7=x-2$
a. $\quad-5$
b. 5
c. 9
d. -9
24. A number increased by 4 is 9 . Write an equation to find the number. Solve the equation.
a. $x+4=9, x=5$
b. $x+4=9, x=-5$
c. $x-9=4, x=13$
d. $x+9=4, x=-13$
25. Overnight, the temperature dropped $9^{\circ} \mathrm{C}$ to $-3^{\circ} \mathrm{C}$. Write an equation to find the starting temperature. Solve the equation.
a. $x-9=-3, x=6$
b. $x-3=-9, x=-6$
c. $x+9=3, x=-6$
d. $x+3=9, x=6$

## Short Answer: Do \#'s 26 and 29. Choose only one of \#'s 27 and 28.

26. A number decreased by 7 is 6 .
a) Write an equation you can solve to find the number.
b) Solve the equation to find the number.
27. The perimeter of a regular hexagon is 48 cm .
a) Write an equation you can solve to find the length of a side, $L \mathrm{~cm}$.
b) Solve the equation to find the side length.
28. The area of this parallelogram is given by the formula $A=b \times h$.

Substitute the values for $A$ and $h$ in the formula to get an equation you can solve for the base $b$. Then find the length of the base.

29. Solve this equation: $x+x-4=6$

## Problem

30. Solve this equation: $x+5-6+x+5=16$ Show your steps.
31. Solve this equation: $x+5-3+x+12=x+4$ Show your steps.

## MMS7Ch6MURQuiz

## Answer Section

## MULTIPLE CHOICE

1. ANS: A PTS: 1

LOC: 7.PR3|7.PR4
KEY: Conceptual Understanding
2. ANS: A PTS: 1

LOC: 7.PR3|7.PR4
KEY: Conceptual Understanding
3. ANS: A PTS: 1

LOC: 7.PR3|7.PR7
KEY: Conceptual Understanding
4. ANS: A PTS: 1

LOC: 7.PR3|7.PR7
KEY: Conceptual Understanding
5. ANS: A PTS: 1

LOC: 7.PR3|7.PR7
KEY: Problem-solving Skills
6. ANS: A PTS: 1

LOC: 7.PR3|7.PR6
KEY: Communication
7. ANS: A PTS: 1

LOC: 7.PR3|7.PR7
KEY: Communication
8. ANS: A PTS: 1

LOC: 7.PR3|7.PR7
KEY: Communication
9. ANS: A PTS: 1 DIF: Easy

REF: 6.2 Using a Model to Solve Equations
TOP: Patterns and Relations (Variables and Equations)
10. ANS: A PTS: 1 DIF: Easy

REF: 6.2 Using a Model to Solve Equations
TOP: Patterns and Relations (Variables and Equations)
11. ANS: A PTS: 1 DIF: Easy

REF: 6.2 Using a Model to Solve Equations
TOP: Patterns and Relations (Variables and Equations)
12. ANS: A PTS: 1 DIF: Moderate

REF: 6.2 Using a Model to Solve Equations
TOP: Patterns and Relations (Variables and Equations)
13. ANS: A PTS: 1 DIF: Moderate

REF: 6.2 Using a Model to Solve Equations
TOP: Patterns and Relations (Variables and Equations)
14. ANS: A PTS: 1 DIF: Moderate

REF: 6.2 Using a Model to Solve Equations
TOP: Patterns and Relations (Variables and Equations)

LOC: 7.PR3|7.PR6
KEY: Conceptual Understanding
LOC: 7.PR3|7.PR6
KEY: Conceptual Understanding
LOC: 7.PR3|7.PR6
KEY: Conceptual Understanding
LOC: 7.PR3|7.PR6
KEY: Conceptual Understanding
LOC: 7.PR3|7.PR6
KEY: Conceptual Understanding
LOC: 7.PR3|7.PR7
KEY: Conceptual Understanding

| 15. | ANS: | A PTS: 1 DIF: Moderate |  |
| :---: | :---: | :---: | :---: |
|  | REF: | 6.2 Using a Model to Solve Equations | LOC: 7.PR3\|7.PR7 |
|  | TOP: | Patterns and Relations (Variables and Equations) | KEY: Conceptual Understanding |
| 16. | ANS: | A PTS: 1 DIF: Moderate |  |
|  | REF: | 6.2 Using a Model to Solve Equations | LOC: 7.PR3\|7.PR6 |
|  | TOP: | Patterns and Relations (Variables and Equations) | KEY: Communication |
| 17. | ANS: | A PTS: 1 DIF: Moderate |  |
|  | REF: | 6.2 Using a Model to Solve Equations | LOC: 7.PR3\|7.PR6 |
|  | TOP: | Patterns and Relations (Variables and Equations) | KEY: Conceptual Understanding |
| 18. | ANS: | A PTS: 1 DIF: Moderate |  |
|  | REF: | 6.2 Using a Model to Solve Equations | LOC: 7.PR3\|7.PR7 |
|  | TOP: | Patterns and Relations (Variables and Equations) | KEY: Problem-solving Skills |
| 19. | ANS: | D PTS: 1 DIF: Easy |  |
|  | REF: | 6.3 Solving Equations Involving Integers | LOC: 7.PR3 \| 7.PR7 |
|  | TOP: | Patterns and Relations (Variables and Equations) | KEY: Conceptual Understanding |
| 20. | ANS: | C PTS: 1 DIF: Easy |  |
|  | REF: | 6.3 Solving Equations Involving Integers | LOC: 7.PR3\|7.PR7 |
|  | TOP: | Patterns and Relations (Variables and Equations) | KEY: Conceptual Understanding |
| 21. | ANS: | A PTS: 1 DIF: Easy |  |
|  | REF: | 6.3 Solving Equations Involving Integers | LOC: 7.PR3\|7.PR6 |
|  | TOP: | Patterns and Relations (Variables and Equations) | KEY: Conceptual Understanding |
| 22. | ANS: | A PTS: 1 DIF: Easy |  |
|  | REF: | 6.3 Solving Equations Involving Integers | LOC: 7.PR3\|7.PR6 |
|  | TOP: | Patterns and Relations (Variables and Equations) | KEY: Conceptual Understanding |
| 23. | ANS: | A PTS: 1 DIF: Moderate |  |
|  | REF: | 6.3 Solving Equations Involving Integers | LOC: 7.PR3\|7.PR6 |
|  | TOP: | Patterns and Relations (Variables and Equations) | KEY: Conceptual Understanding |
| 24. | ANS: | A PTS: 1 DIF: Moderate |  |
|  | REF: | 6.3 Solving Equations Involving Integers | LOC: 7.PR3\|7.PR6 |
|  | TOP: | Patterns and Relations (Variables and Equations) | KEY: Communication |
| 25. | ANS: | A PTS: 1 DIF: Moderate |  |
|  | REF: | 6.3 Solving Equations Involving Integers | LOC: 7.PR3\|7.PR6 |
|  | TOP: | Patterns and Relations (Variables and Equations) | KEY: Communication |

## SHORT ANSWER

26. ANS:
a) $x-7=6$
b) $x=13$

PTS: 1 DIF: Moderate REF: 6.1 Solving Equations
LOC: 7.PR3|7.PR7
KEY: Communication
27. ANS:

A regular hexagon has 6 sides.
a) $L=\frac{48}{6}$
b) $\quad L=8$

The length of a side is 8 cm .

PTS: 1 DIF: Moderate REF: 6.1 Solving Equations
LOC: 7.PR3|7.PR7
TOP: Patterns and Relations (Variables and Equations)
KEY: Communication
28. ANS:

The length of the base is 7 cm .
PTS: 1 DIF: Moderate REF: 6.2 Using a Model to Solve Equations
LOC: 7.PR3|7.PR7
KEY: Problem-solving Skills
29. ANS:
$x=5$
PTS: 1 DIF: Moderate REF: 6.3 Solving Equations Involving Integers
LOC: 7.PR3|7.PR6
TOP: Patterns and Relations (Variables and Equations)
KEY: Conceptual Understanding

## PROBLEM

30. ANS:

$$
\begin{aligned}
x+5-6+x+5 & =16 \\
x+x+4 & =16 \\
2 x & =12 \\
x & =6
\end{aligned}
$$

PTS: 1
DIF: Moderate
REF: 6.3 Solving Equations Involving Integers
LOC: 7.PR3|7.PR7
TOP: Patterns and Relations (Variables and Equations)
KEY: Procedural Knowledge | Communication
31. ANS:

$$
\begin{aligned}
x+5-3+x+12 & =x+4 \\
x+x+14 & =x+4 \\
x+14 & =4 \\
x+14-14 & =4-14 \\
x & =-10
\end{aligned}
$$

PTS: 1 DIF: Difficult REF: 6.3 Solving Equations Involving Integers
LOC: 7.PR3|7.PR7 TOP: Patterns and Relations (Variables and Equations)
KEY: Procedural Knowledge | Communication

