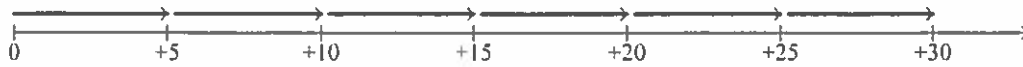


## Dividing Integers Assignment

### Multiple Choice

Identify the choice that best completes the statement or answers the question.

- \_\_\_\_\_ 1. Write the integer division modelled by this number line.



- a.  $(+30) - (+6) = +24$                       c.  $(+30) - (+5) = +25$   
 b.  $(+30) = (+5)(+6)$                       d.  $(+30) \div (+5) = +6$
- \_\_\_\_\_ 2. Find the quotient  $(-18) \div (+6)$ . Use a number line if it helps.  
 a. -3                      b. +3                      c. -12                      d. -24
- \_\_\_\_\_ 3. Which quotients are positive?  
 i)  $(+21) \div (-7)$   
 ii)  $(+84) \div (+6)$   
 iii)  $(-32) \div (+4)$   
 iv)  $(-12) \div (-6)$   
 a. ii and iii                      b. i and iii                      c. ii and iv                      d. i, iii, and iv
- \_\_\_\_\_ 4. Start at 0 on the number line. Move 2 units left each time until you reach -10.  
 How many moves did you make?  
 a. 10                      b. 8                      c. 2                      d. 5
- \_\_\_\_\_ 5. Inside a cooling tower, the temperature fell  $3^{\circ}\text{C}$  each hour for a total change of  $-27^{\circ}\text{C}$ .  
 Find the number of hours it took for the change in temperature.  
 a. 9 h                      b. -9 h                      c. 24 h                      d. 27 h
- \_\_\_\_\_ 6. Find this quotient.  $(+28) \div (-7)$   
 a. -35                      b. +4                      c. +35                      d. -4
- \_\_\_\_\_ 7. Divide.  $\frac{+40}{-10}$   
 a. +30                      b. +4                      c. +50                      d. -4
- \_\_\_\_\_ 8. Divide.  $\frac{-66}{+3}$   
 a. -22                      b. -69                      c. +22                      d. -63
- \_\_\_\_\_ 9. A mountain climber is at an elevation of 3180 m. After 4 h, he is at an elevation of 1420 m.  
 Use this formula to find the climber's vertical speed.  
 Vertical speed =  $\frac{\text{Final elevation} - \text{Initial elevation}}{\text{Time}}$   
 a. -1150 m/h                      b. -440 m/h                      c. -1760 m/h                      d. -660 m/h

Name: \_\_\_\_\_

ID: A

10. One day at 3 p.m., the temperature was  $-6^{\circ}\text{C}$  in a city in Alaska.  
At 10 p.m., the temperature was  $-20^{\circ}\text{C}$ .  
What was the average change in temperature per hour?
- a.  $-4^{\circ}\text{C}$                       b.  $-3^{\circ}\text{C}$                       c.  $-2^{\circ}\text{C}$                       d.  $-14^{\circ}\text{C}$

**Short Answer**

11. Write a related multiplication equation for  $(-16) \div (+2) = -8$ .
12. Use the integers  $-18, +6, -3$  to write 2 different division equations.
13. The sum of the daily low temperatures over a period of 4 days was  $-40^{\circ}\text{C}$ .  
What was the mean daily low temperature during this period?
14. The water level in a pool dropped 80 mm each hour. The total drop in water level was 480 mm.  
How long did it take for the water level to change?
15. Replace  $\square$  with an integer to make the equation true.  
 $(+24) \div \square = -3$
16. Replace  $\square$  with an integer to make the equation true.  
 $\square \div (-12) = +2$
17. What integer should you divide 55 by to get a negative integer?

**Problem**

18. What integer would you divide  $-38$  by to get
- a) the greatest integer quotient?  
b) the least integer quotient?  
c) the integer quotient closest to 0?

## Dividing Integers Assignment Answer Section

### MULTIPLE CHOICE

1. ANS: D            PTS: 1            DIF: Easy  
REF: 2.3 Using Models to Divide Integers            LOC: 8.N7  
TOP: Number        KEY: Conceptual Understanding
2. ANS: A            PTS: 1            DIF: Easy  
REF: 2.3 Using Models to Divide Integers            LOC: 8.N7  
TOP: Number        KEY: Conceptual Understanding
3. ANS: C            PTS: 1            DIF: Moderate  
REF: 2.3 Using Models to Divide Integers            LOC: 8.N7  
TOP: Number        KEY: Conceptual Understanding
4. ANS: D            PTS: 1            DIF: Moderate  
REF: 2.3 Using Models to Divide Integers            LOC: 8.N7  
TOP: Number        KEY: Conceptual Understanding | Problem-solving Skills
5. ANS: A            PTS: 1            DIF: Moderate  
REF: 2.3 Using Models to Divide Integers            LOC: 8.N7  
TOP: Number        KEY: Conceptual Understanding | Problem-solving Skills
6. ANS: D            PTS: 1            DIF: Easy  
REF: 2.4 Developing Rules to Divide Integers            LOC: 8.N7  
TOP: Number        KEY: Conceptual Understanding
7. ANS: D            PTS: 1            DIF: Easy  
REF: 2.4 Developing Rules to Divide Integers            LOC: 8.N7  
TOP: Number        KEY: Conceptual Understanding
8. ANS: A            PTS: 1            DIF: Easy  
REF: 2.4 Developing Rules to Divide Integers            LOC: 8.N7  
TOP: Number        KEY: Conceptual Understanding
9. ANS: B            PTS: 1            DIF: Moderate  
REF: 2.4 Developing Rules to Divide Integers            LOC: 8.N7  
TOP: Number        KEY: Conceptual Understanding | Procedural Knowledge
10. ANS: C            PTS: 1            DIF: Moderate  
REF: 2.4 Developing Rules to Divide Integers            LOC: 8.N7  
TOP: Number        KEY: Conceptual Understanding | Problem-solving Skills

### SHORT ANSWER

11. ANS:  
 $(-8) \times (+2) = -16$   
  
PTS: 1            DIF: Moderate        REF: 2.3 Using Models to Divide Integers  
LOC: 8.N7        TOP: Number        KEY: Conceptual Understanding

12. ANS:  
 $(-18) \div (+6) = -3$   
 $(-18) \div (-3) = +6$

PTS: 1  
 LOC: 8.N7

DIF: Moderate  
 TOP: Number

REF: 2.3 Using Models to Divide Integers  
 KEY: Conceptual Understanding

13. ANS:  
 $-10^{\circ}\text{C}$

PTS: 1  
 LOC: 8.N7

DIF: Moderate  
 TOP: Number

REF: 2.3 Using Models to Divide Integers  
 KEY: Conceptual Understanding | Problem-solving Skills

14. ANS:  
 6 h

PTS: 1  
 LOC: 8.N7

DIF: Moderate  
 TOP: Number

REF: 2.3 Using Models to Divide Integers  
 KEY: Conceptual Understanding | Problem-solving Skills

15. ANS:  
 $(+24) \div (-8) = -3$

PTS: 1  
 LOC: 8.N7

DIF: Moderate  
 TOP: Number

REF: 2.4 Developing Rules to Divide Integers  
 KEY: Conceptual Understanding | Problem-solving Skills

16. ANS:  
 $(-24) \div (-12) = +2$

PTS: 1  
 LOC: 8.N7

DIF: Moderate  
 TOP: Number

REF: 2.4 Developing Rules to Divide Integers  
 KEY: Conceptual Understanding | Problem-solving Skills

17. ANS:  
 $-1, -5, -11, -55$

PTS: 1  
 LOC: 8.N7

DIF: Moderate  
 TOP: Number

REF: 2.4 Developing Rules to Divide Integers  
 KEY: Conceptual Understanding | Problem-solving Skills

## PROBLEM

18. ANS:  
 a)  $-1$   
 b)  $+1$   
 c)  $+38$  or  $-38$

PTS: 1  
 LOC: 8.N7

DIF: Difficult  
 TOP: Number

REF: 2.4 Developing Rules to Divide Integers  
 KEY: Problem-solving Skills