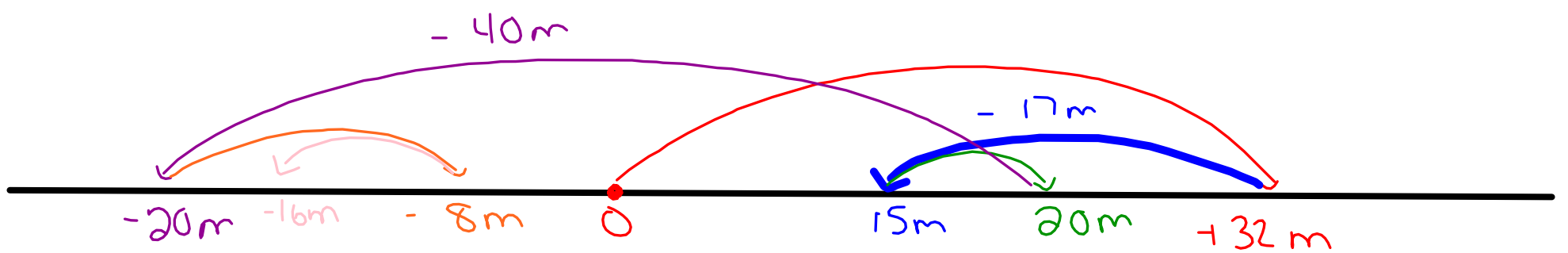


17



$$+32 + (-17m) + (5) - (-40) + 12 + (-8)$$

$$= -16m$$

$$32 + 17 + 5 + 40 + 12 + 8 = 114m$$

18a) 1999

$$b) \quad 8\,775\,63 \quad (-115\,254) + (12\,054) + (-215) \\ + 213\,645 + 18\,009 + (-17) + (-44\,740)$$

$$= 8\,859\,115$$

c) average : $\frac{\text{sum of all the values}}{\text{number of values}}$

$$= \frac{(-115\,254) + (12\,054) + (-215) + (213\,645) + (18\,009) \\ + (-17) + (-44\,740)}{7}$$

$$= \frac{83\,482}{7}$$

$$= 11\,926$$

Panorama 3.4

Multiplication and Division of Integers

- The product or the quotient of two integers of the same sign is positive.
- The product or the quotient of two integers of opposite signs is negative.

product is the solution to multiplication
quotient is the solution to division

$$(-3) \times (-4) = +12$$

$$(-2) \times (+6) = -12$$

$$(+7) \times (+2) = +14$$

$$(-12) \div (+3) = -4$$

$$(-36) \div (-6) = +6$$

The product or the quotient of more than two integers can be determined by counting the number of negative integers.

- If the number of negative integers is even, the product or the quotient is positive
- If the number of negative integers is odd, the product or the quotient is negative

$$(-2) \times (-2) \times (-2) \times (-2) = +16$$

$$(-3) \times (-3) \times (-3) \times (-3) \times (-3) = -243$$

$$(-2) \times (-3) \times (2) \times (4) = +48$$

For exponents, the rules for multiplying integers apply. The mathematical convention is to place the negative within parenthesis if it is effected by the exponent.

$$(-5)^2 = (-5) \times (-5) = +25$$

$$-5^2 = -(5 \times 5) = -25$$

$$(-5)^3 = (-5) \times (-5) \times (-5) = -125$$

Check Your Understanding

Textbook Volume A - pg. 144

Questions 1, 2, 3, 5, 9, 10, 12, 19, 20