

**PAT Sample Questions (NO CALCULATOR) PART II**

1.  $-3 - (-4) + (-10)$

2.  $-7 - 11 + (-9)$

3.  $12 - (-15) - 7$

4. What is the value of  $2^3 + 2^0$ ?

5. What is the value of  $4^2 + 2^5 + 3^0$ ?

Evaluate the following four expressions.

**Expression #1**

$$-(-2)^3$$

**Expression #2**

$$-2^3$$

**Expression #3**

$$-(-3)^2$$

**Expression #4**

$$-(-3^2)$$

6.

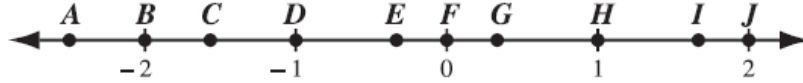
Which numbered expression shown above has the largest value and what is that value?

7. What is the value of  $\sqrt{\frac{5}{20}}$  expressed as a fraction in simplest form?

8. What is the value of  $13.2 + 0.05 - 5.45$ ?

9.

Consider the inequality  $3(x-2) > 4x - 5$ .



How many of the points labelled with a letter on the number line above satisfy the inequality?

10. To the nearest whole number, what is the approximate square root of 200?

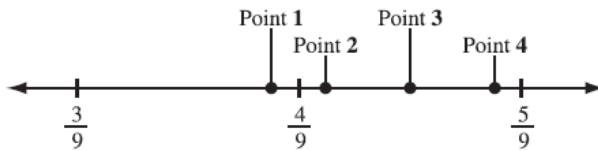
11. What is 150% of 60?

12. What is 200% of 300?

13. In simplest form, what is the value of  $4 \times \left(2 + \frac{3}{4}\right)$ ?

14. Simplify, then evaluate  $\frac{(3^4)^3 \times 3^2}{3 \times 3^{10}}$ .

15. What is the value of  $-\frac{2}{5} + 0.5 + 0.75$  expressed as a fraction in simplest form?



16. Which point best represents the location of  $\sqrt{\frac{17}{81}}$  on the number line shown above?

17. What is the value of  $(2^3 - 3^2)^2$ ?

18. What is the value of  $\sqrt{\frac{1}{9}} \times \sqrt{\frac{36}{49}} \times \sqrt{49\,000\,000}$ ?

19.  $14.8 + 0.02 - 5.83$

20.  $2.1 + 0.09 - 1.61$

21.  $21.8 - 1.6 + 9.7$

22.  $5^2 + 5^0$

23.  $2^4 + 2^3 + 2^2 + 2^1 + 2^0$

24.  $\frac{1}{8} + \frac{1}{4} + 3\frac{1}{2}$

25.  $-\frac{1}{4} \times \left(\frac{1}{8}\right) \times 40$

26.  $-\frac{1}{2} \times \left(-\frac{1}{3}\right) \times 18$

27.  $\frac{3}{5} \times \left(\frac{1}{2}\right) \times (-20)$

28. What is the value of  $\sqrt{\frac{8}{50}}$  expressed as a fraction in simplest form?

29. To the nearest whole number, what is the approximate square root of 160?

30. What is 250% of 40?

31. What is 75% of 160?

32.  $5 \times \left(3 + \frac{2}{5}\right)$

33.  $6 \times \left(2 + \frac{1}{6}\right)$

34.  $8 \times \left(4 + \frac{7}{8}\right)$

What is the integer answer to the following questions:

35.  $\frac{(4^4)^4 \times 4^2}{4 \times 4^{16}}$

36.  $\frac{(3^4)^5 \times 3^3}{3 \times 3^{19}}$

37.  $\frac{(2^4 \times 2)^2 \times 2^5}{2^8 \times 2^2}$

38.  $\frac{12}{(4-5)^3}$

39.  $\frac{19+1}{(5-7)^2}$

40.  $\frac{36}{(2-5)^2}$

41.  $\sqrt{\frac{1}{4}} \times \sqrt{\frac{16}{81}} \times \sqrt{810\,000}$

42.  $\sqrt{\frac{1}{25}} \times \sqrt{\frac{100}{49}} \times \sqrt{4\,900\,000\,000}$